

Uranium Mine Waste on the Navajo Re...

NE WASTE ON THE NAVAJO RESERVATION

JOINT OVERSIGHT HEARING

BEFORE THE
SUBCOMMITTEE ON
OVERSIGHT AND INVESTIGATIONS
AND THE
SUBCOMMITTEE ON
NATIVE AMERICAN AFFAIRS
OF THE

COMMITTEE ON
NATURAL RESOURCES
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

ON

CLEANUP OF ABANDONED URANIUM MINES AND MINE WASTE ON THE
NAVAJO RESERVATION

HEARING HELD IN WASHINGTON, DC
NOVEMBER 4, 1993

Serial No. 103-58

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URANIUM MINE WASTE ON THE NAVAJO RESERVATION

THURSDAY, NOVEMBER 4, 1993

HOUSE OF REPRESENTATIVES, SUBCOMMITTEE ON OVER-
SIGHT AND INVESTIGATIONS, JOINT WITH SUBCOMMIT-
TEE ON NATIVE AMERICAN AFFAIRS,

Washington, DC.

The subcommittees met, pursuant to call, at 10:05 a.m. in room
- 1324, Cannon House Office Building, Hon. George Miller (chair of
the Subcommittee on Oversight and Investigations) presiding.

STATEMENT OF HON. GEORGE MILLER

Mr. MILLER. The combined Subcommittees on Oversight and In-
vestigations and Native American Affairs will come to order for the
purposes of a joint hearing on the cleanup of abandoned uranium
mines and mine waste on the Navajo reservation.

From the mid-1940s to the late 1970s, the Federal Government
contracted with private mining companies to produce uranium
needed to sustain this country's nuclear weapons development pro-
gram. As a result, thousands of mines, located mostly in the West
and Southwest, were blasted into the earth to attract uranium-rich
ore. The high-grade ore was sent to one of twenty-six uranium
mills for processing and refinement. Lesser quality uranium was
left to the mine sites along with the waste and the huge tailings
piles.

When the Government's need for uranium diminished, the min-
ing companies walked away from the mines without sealing the
tunnel openings, filling the gaping pits, sometimes hundreds of feet
deep, or removing the piles of radioactive uranium ore and mine
waste.

These abandoned mines remain a source of potential danger to
anyone coming into contact with them. Over 1,000 of these un-
sealed tunnels, unfilled pits and radioactive waste piles still re-
main on the Navajo reservation in Arizona, New Mexico, and Utah.
Some of the Navajo families live within a hundred feet of the mine
sites, graze their livestock among the mine tailings, and have used
radioactive mine tailings to build their homes. Navajo children play
in the mines and climb on the tailings piles. Uranium mine tailings
have turned up in school playgrounds.

Recently, some effort has been made by the Federal Government
to begin dealing with the radioactive mess left on the reservation.
DOE is in the process of reclaiming the uranium mill sites, includ-
ing the four which are on the Navajo reservation, where tons of ra-
dioactive wastes were abandoned. The Department of the Interior

has provided some assistance to the tribes in sealing some of the mine openings and filling in the deep pits. EPA reclaimed one abandoned uranium mine site near Bluewater, New Mexico, after a public health advisory was issued declaring it an imminent radiation health hazard.

However laudable these efforts, such a piecemeal and uncoordinated approach to removing the uranium blight from Navajo lands fails to eliminate the radiation health hazard to all those Navajo families living with open uranium mines and radioactive waste in their backyards, their homes, and their children's playgrounds.

It is our intention at this hearing to focus attention on the resources which are available to deal with this problem and to encourage the appropriate government agencies to find creative ways to coordinate their efforts and to meet this important health need.

At this point, I would like to recognize the chair of the Subcommittee on Native American Affairs, Bill Richardson.

STATEMENT OF HON. BILL RICHARDSON

Mr. RICHARDSON. Thank you, Mr. Chairman. I am pleased to join you this morning to focus on an issue that is very important to the Navajo Nation, and that is the cleaning up of abandoned uranium mines which dot their huge reservation. I am also pleased to be here with the other champion of the Navajo Nation, Representative Karan English.

In order to fill the huge demands for uranium to fuel the nuclear weapons program of the 1940s through the 1970s, many Indian tribes were encouraged to mine the rich uranium which lay beneath the surface of their land. The Navajo Nation saw mining uranium ore as an act of patriotism and a means for economic development and jobs.

Before long, the Navajo reservation was a sea of underground and open pit mines. High-grade ore was sent on to uranium mills for processing, while lower grade ore was simply dumped near mine openings.

As the Federal Government's need for uranium dried up, so did the operations of the mines and mills. At that point most mining companies just walked away, leaving the mines and mine waste behind. Decades later, over 1,000 unreclaimed mine sites still exist.

Multiple health issues arise from these mines. Blocks of uranium ore sit piled outside of mines releasing gamma radiation into the air. Children see these piles, open tunnels, and deep shafts, as an inviting place to play and explore. Campers and those seeking shelter from the elements, ironically, use open mines as a place of protection.

The configuration of mined ore resulted in large rectangular chunks of rock. Many Navajos used discarded rocks to build homes and ceremonial sweat lodges, thus surrounding themselves and their families with constant radiation in an enclosed area.

Most of the pit mines have high walls which are now used in inclement weather to house livestock. These animals are then slaughtered and eaten.

I believe that the Navajo Nation has done a commendable job of educating its people of the dangers of radiation, but it is very dif-

difficult to convince many of the older, traditional Navajo that anything which comes out of Mother Earth will harm them.

Three Federal agencies have some responsibilities to address the problems on the Navajo reservation. Currently, the Department of Energy is cleaning up the last of the uranium mill sites on the Navajo reservation, and the tribe, with its authority and resources through SMCRA, is attempting to deal with some of the mine sites.

I am also aware that EPA has completed emergency cleanup of the area around Bluewater, after it found the region to be an "imminent radiation health hazard." This is all well and good, but there must be a final and complete way to address the problems of cleanup.

Driving through parts of the Navajo Nation, which I represent on the New Mexico side, one will, I dare say, see some of the most beautiful sites on Earth. Monument Valley is awe inspiring, but once you know what abandoned mines with waste piles look like dotting the horizon and understand the potential for danger which exists, it is difficult to look at the area again with the same innocent eyes.

I look forward to hearing from my friends of the Navajo Nation as well as the federal witnesses here today.

Mr. Chairman, I think we also need to look at the radiation exposure compensation program. This is not working well within the Department of Justice. Addressing claims is slow. There is an inefficient bureaucratic process. While that is not the subject of this hearing, I hope with your Oversight and Investigations Subcommittee you join again with our Native American Affairs Subcommittee to try to deal with that problem in the future.

Thank you, Mr. Chairman.

[Prepared statement of Mr. Richardson follows:]

STATEMENT OF REPRESENTATIVE BILL RICHARDSON

Joint Oversight Hearing
Cleanup of Abandoned Uranium Mines and
Mine Waste on Navajo Reservation

Subcommittee on Oversight and Investigations
Subcommittee on Native American Affairs
November 4, 1993

I am pleased to join Chairman Miller this morning to focus on an issue of great importance to the Navajo Nation - that of cleaning up abandoned uranium mines which dot the reservation.

In order to fill the huge demand for uranium to fuel the nuclear weapons program of the 1940's through the 1970's, many Indian tribes were encouraged to mine the rich uranium which lay beneath the surface of their land. The Navajo Nation saw mining uranium ore as act of patriotism and a means for economic development and jobs. Before long Navajo was a sea of underground and open pit mines. High grade ore was sent on to uranium mills for processing while lower grade ore was simply dumped near mine openings. As the Federal government's need for uranium dried up so did the operations of the mines and mills. At that point most mining companies just walked away leaving the mines and mine waste behind. Decades later over 1,000 unreclaimed mine sites still exist.

Multiple health issues arise from these mines. Blocks of uranium ore sit piled outside of mines, releasing gamma radiation into the air. Children see these piles as well as the open tunnels and deep shafts as an inviting place to play and explore. Campers and those seeking shelter from the elements ironically use open mines as a place of protection. The configuration of mined ore resulted in large rectangular chunks of rock. Many Navajos used discarded rocks to build homes and ceremonial sweat lodges, thus surrounding themselves and their families with constant radiation in an enclosed area. Most of the pit mines have high walls which are used in inclement weather to house livestock. These animals are then slaughtered and eaten. I believe that the Navajo Nation has done a commendable job of educating its people to the dangers of radiation but it is quite difficult to convince many of the older traditional Navajos that anything which comes out of Mother Earth will harm them.

Three Federal agencies have some responsibilities to address the problems at Navajo. Currently, the Department of Energy is cleaning up the last of the uranium mill sites on Navajo and the tribe with its authority and resources through SMCRA is attempting to deal with some of the mine sites. I am also aware that EPA has completed emergency cleanup of the area around Bluewater after it found the region to be an "imminent radiation health hazard."

This is all well and good but there must be a final and complete way to address the problems of cleanup.

Driving through parts of the Navajo Nation one will, I dare say, see some of the most beautiful sights on earth - Monument Valley is awe inspiring. But once you know what abandoned mines with waste piles look like dotting the horizon, and understand the potential for danger that exists, it is difficult to look at the area again with the same innocent eyes.

I look forward to hearing from my friends of the Navajo Nation as well as the Federal witnesses. I hope that the testimony will lead to the successful cleanup once and for all of these mine sites.

Mr. MILLER. Thank you.
Now, I would like to recognize Ms. English.

STATEMENT OF HON. KARAN ENGLISH

Ms. ENGLISH. Just a brief statement. I would like to thank both chairmen for having this hearing on an issue that has been relevant for at least a decade.

Long ago, when we first became familiar with the hazards of uranium near a landfill in the Tuba City area, we couldn't get the Federal Government to do anything about it. It is surprising to me that a decade later we are still working on these problems.

I am delighted to be here today, and I look forward to the testimony of the witnesses. I also look forward to implementing a program of resolution.

Thank you.

Mr. MILLER. With that, our first panel will be made up of Sadie Hoskie, who is the director of the Navajo Environmental Protection Agency, accompanied by Faith Roessel, who is the executive director of the Navajo Nation Washington Office, Perry Charlie, Navajo Abandoned Mine Land Reclamation Department, and Dr. Rajen, who was formerly with the Navajo EPA.

If you will come forward, we will recognize you in the order in which—Mr. Richardson?

Mr. RICHARDSON. Mr. Chairman, before we begin I would like to take a moment to extend on behalf of our Subcommittee on Native American Affairs a very hearty congratulations to one of our witnesses, Faith Roessel. It has just been announced that she will be appointed the new Deputy Assistant Secretary for Indian Affairs at the Department of the Interior.

Basically, she will be Assistant Secretary Ada Deer's right-hand person. And, Mr. Chairman, it is a big loss because we have been dealing with her on Navajo issues for many years. Now, she will assume a wider role. Mr. Chairman, Navajo Nation's loss will be all of Indian country's gain.

I am delighted to just state that for the record.

Mr. MILLER. Congratulations.

Ms. ROESSEL. Thank you.

PANEL CONSISTING OF FAITH ROESSEL, EXECUTIVE DIRECTOR, NAVAJO NATION WASHINGTON OFFICE; AND SADIE HOSKIE, DIRECTOR, NAVAJO ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY PERRY CHARLIE, NAVAJO ABANDONED MINE LAND RECLAMATION DEPARTMENT, AND DR. GAURAV RAJEN, MISSION RESEARCH CORPORATION AND FORMERLY WITH NAVAJO EPA

STATEMENT OF FAITH ROESSEL

Ms. ROESSEL. Good morning, Chairman Miller and Chairman Richardson, Congresswoman English and other staff members.

My name is Faith Roessel. I am the director of the Navajo Nation, Washington office, and on behalf of Peterson Zah, President of the Navajo Nation, who sends his regrets he cannot be here, I would like to thank both subcommittees and their staff for displaying extraordinary commitment to addressing the abandoned ura-

nium mines problem on the Navajo Nation by organizing this hearing today.

This is a critical issue to the Navajo Nation because the hazards of radioactive uranium waste from abandoned uranium mines continue to affect the lives and health of our Navajo people and contaminate our lands, and one thing that we are struck with, being Navajos sitting up here before you, is just how much this issue of the abandoned mines has become a part of our lands and a part of our landscape that it becomes invisible.

So the fact that we are having this hearing today really will be sending a signal to our own people back home that the status quo cannot continue as it has and that really Washington does care in terms of the lives and health of our people. Because what we will hear is that this is not normal, the hazards of these wastes are high, and we all must work together to combat the problems.

From the 1920s to the early 1970s uranium ore was mined on the Navajo reservation for the U.S. Atomic Energy Program. The primary purchaser and beneficiary of this mining activity was the United States Government, and the development of uranium resources was entrusted to the Atomic Energy Commission. As a result of this mining, the Navajo Nation has been left with at least 1,104 known abandoned uranium mines and tons of hazardous radioactive uranium mine wastes scattered across our lands.

Many Navajo people live and work in close proximity to highly contaminated soil and breathe and drink contaminated air and water. Some residents, as our chairmen have noted, live within a few hundred feet of highly radioactive waste. Sheep and livestock, which are the basis for our subsistence, graze on contaminated vegetation and drink contaminated water, and as has been noted previously, Navajo homes are built with radioactive mine waste rocks and our children play daily in the vicinity of the mines and on mill tailing sites. We desperately need these sites remediated.

During this hearing you will hear testimony from Sadie Hoskie, who is the director of the Navajo Environmental Protection Administration, under which the Navajo Superfund program is administered. Sadie is accompanied by Dr. Gaurav Ragen, formerly of the Navajo Superfund program, who is knowledgeable of the long history of the abandoned uranium mines cleanup and Federal involvement in these efforts, and he is available to the committee for questions.

You will also hear from Perry Charlie, program manager from the Shiprock Office of the Navajo Abandoned Mine Lands Reclamation Program, and it was Perry who took your staff around Navajo country to witness the abandoned sites.

These witnesses will describe the Navajo Nation's programs that are designed to oversee and manage the cleanup of abandoned mines on Navajo lands. They will describe the problems, the health risks, and why these risks are higher at Navajo sites than others. They will describe the policies and the roles of the Federal agencies and will offer recommendations, because there really must be a more satisfactory way of handling this situation.

The Navajo Nation cannot begin to express to this committee the appreciation that we feel for having this hearing. We are continuing to pay an enormous price. The United States Government set

the policy for extraction of uranium ore and it is only right and reasonable that it take responsibility and leadership in cleaning up our lands and our environment. All we ask here, sitting at this table, is to be a partner in that effort.

We look forward to working with the committee. We can no longer afford to have our children think that an abandoned uranium mill tailings site is their sandbox or their playground. Otherwise, another generation of Navajo people will be debilitated like their forefathers who extracted ore and who are no longer with us.

I would like to turn it over to the next witness.

Sadie?

STATEMENT OF SADIE HOSKIE

Ms. HOSKIE. Good morning, Chairman Miller, Chairman Richardson, and Congresswoman English. I appreciate the opportunity to present testimony here this morning.

As mentioned, my name is Sadie Hoskie, and I am the director of the Navajo Environmental Protection Administration.

As mentioned before, the Navajo Nation contains at least 1,104 known abandoned uranium mines. The waste volumes, radon gas emissions, concentrations of radionuclides in the soil, levels of gamma radiation, and bioaccumulation in the food chain are present, and far greater at the abandoned uranium sites than what had previously been assumed in studies mandated by the U.S. Congress.

In these representative scenarios, a maximally exposed individual was assumed to live one mile from the site. At many of our Navajo sites, residents live within a few hundred feet of these radioactive wastes. In some cases, uranium tailings were used as housing construction fill because it was free and good-sized material.

The scenarios assumed that the major path for human ingestion of uranium mine water and contaminated foods is by eating livestock and vegetables grown at some distance from the mine sites, but at the Navajo sites free-range sheep and cows commonly graze upon vegetation growing on the radioactive wastes. For these reasons, the cumulative risk to human health at the Navajo abandoned mine sites is much greater than that estimated at similar sites in other regions.

At many Navajo sites, we believe that the excess fatal cancer risk to the nearby population is greater than 1 in 10,000 for a two-year exposure. A risk level of 1 in 10,000 is generally considered unacceptable by the U.S. EPA at a contaminated site, and Superfund emergency response and removal actions are therefore appropriate.

For the committee's background, a paper is attached to our testimony that discusses some of the major health concerns related to abandoned uranium mines and problems with these earlier studies.

Superfund pre-remedial assessment actions at abandoned uranium mine sites are currently on hold because of a decision by EPA Region IX to allow the Navajo Abandoned Mine Lands Reclamation Department to reclaim even some of the more critical sites first. We do not have a problem with sites being remediated by the Navajo AML when they are best qualified to do so, such as when the

sites do not have an active responsible party, they do not pose an imminent danger to human health, and are not likely to score very high on the Hazard Ranking System.

However, other critical sites should be assessed and rapidly moved through the Superfund process using, for instance, the Superfund Accelerated Cleanup Model.

Such sites, for example, are the abandoned uranium mines on King Tutt mesa and the Carrizo mountains where the Navajo Superfund program has conducted Superfund site inspections at considerable cost and expense to the Federal Government, collected and analyzed on-site and off-site environmental samples all using U.S. EPA protocols and certified laboratories, and proven through factual data that the sites score very high on the Hazard Ranking System.

The U.S. EPA has determined that these sites do not need to be listed on the Superfund National Priorities List. Such decisions whether to proceed with Superfund actions at a potential Superfund site are under the sole authority of the U.S. EPA.

Although the EPA consults with its cooperative agency, such as tribal and State Superfund programs, the determination of whether a site moves forward within the Superfund process is EPA's decision.

The decision not to move some critical sites along the Superfund process and to defer them to a Navajo AML reclamation is a decision that has been made by the U.S. EPA and not at the request of the Navajo Nation. This decision is detrimental to the interests of the Navajo Nation and we believe contrary to the intent of the Congress in framing SMCRA under which the Navajo AML Reclamation Department operates, and CERCLA, or Superfund, under which the authority of the Navajo Superfund program of the Navajo EPA operates.

Other U.S. EPA regions, such as Region VI, do not hesitate to process abandoned uranium mines through Superfund assessments and aggressively pursue Superfund actions at abandoned uranium mine sites.

In October 1988, the Navajo Nation was granted "Treatment As State" status and awarded U.S. EPA grant funds through a Superfund Memorandum of Agreement with EPA Region VI. The Navajo Superfund program was created to assess and respond to potential or actual hazardous releases and to ensure that adequate action through public participation is undertaken to protect public health, welfare, and the environment on the Navajo Nation.

Under the authority of CERCLA, the responsibilities of the Navajo Superfund program include site discovery, inventory, and prioritization; preliminary assessments for threats to public health and the environment; site inspections to determine site placement on the National Priorities List; emergency response to releases or threatened releases of hazardous substances at sites such as abandoned mines, herbicide storage area, sheep dip vats, oilfield pits, and gasoline service stations; compliance monitoring of work at existing Superfund sites on or adjacent to Navajo Nation boundaries; and cost recovery for cleanup costs from any or all of the responsible parties.

Federal oversight from the EPA was originally provided by EPA Region VI in Dallas, Region VIII out of Denver, and Region IX out of San Francisco.

However, in 1991, jurisdiction over the entire Navajo Nation's lands was transferred over to EPA Region IX in San Francisco to be the sole and lead region that the Navajo Nation will work with through a formal Memorandum of Agreement.

Funding for the Navajo Superfund program was then transferred from EPA Region VI over to Region IX, and the summary of the funding is summarized in table 2.

Between 1989 and 1993, the Navajo Superfund program completed the preliminary assessment step of the Superfund process for 42 abandoned uranium mine sites. Most of these site assessments were done under a Superfund Memorandum of Agreement with EPA Region VI.

These sites were then assigned a score using the Superfund Hazard Ranking System. Eleven sites, based on their low score, were deemed to require no further remedial action. Out of the 42 sites, 28 scored over 28.5 on the Hazard Ranking System; 23 of these sites qualified for the site inspection stage of the Superfund process which further refines the Hazard Ranking System score to determine whether the sites qualify for placement on the Superfund National Priorities List; 7 site inspections were completed through field collection of environmental data. Other sites were completed using existing data. Many of these sites that should have had site inspections conducted are still waiting to be evaluated for possible placement on the National Priorities List.

The Navajo Nation recommends that the abandoned uranium mine sites should be properly apportioned between the Navajo Superfund program and the Navajo AML so that the sites can be addressed as expediently, completely, and permanently as possible.

This cooperative effort is necessary because the environmental problems posed by such sites and the natural resource damages suffered by the Navajo Nation are too great for one tribal department, the Navajo AML, to contend with without other support.

According to the draft strategy developed at the interagency meeting, January 22, 1992, any sites ineligible for SMCRA post-1977 sites, are to be either funded by the Navajo Nation through enactment of a Navajo Nation environmental response law, which has not been formulated yet, or referred to EPA Region IX for hazard ranking evaluation or emergency removal assessment.

A cooperative agreement between Navajo AML and Navajo EPA was developed and entered into April 1993. This agreement serves as a mechanism to address all abandoned uranium mines; sites which are not eligible for reclamation by either one of the departments are referred to the other department and vice versa.

The agreement formalizes the exchange of pertinent information related to mine sites between the two departments. Sites which are potentially eligible for the National Priorities List should be handled by Navajo Superfund program and must be considered ineligible for remediation by Navajo AML.

I am sorry?

Mr. MILLER. Which agreement did you just refer to?

Ms. HOSKIE. The internal Navajo Nation Memorandum of Agreement.

Mr. MILLER. Thank you.

Ms. HOSKIE. Although the Navajo AML does excellent work, there are limitations on the extent of remediation that can be performed under the authorization of SMCRA. All of these problems can be remedied through the use of CERCLA or the Superfund law, which is designed to address exactly those problems that SMCRA cannot.

CERCLA can address the threats to human health and the environment by ensuring that the many complex environmental issues that exist at the abandoned uranium mine sites are treated and that full public participation takes place. Such Superfund action has been taken by the Navajo Nation in Region IX at the Bluewater uranium mine site where the Agency for Toxic Substances and Disease Registry had issued a public health advisory. An emergency response action was taken at this site.

The full range of off-site contamination problems at Bluewater still needs to be addressed, however, through remedial action, and this has not occurred as of today.

Since the Bluewater project, however, conducting further preliminary assessments or proceeding on to the site inspection stage for the uranium mine sites has been stalled.

EPA Region IX provides all Federal oversight for the Navajo Superfund program with the exception of monitoring duties at two National Priorities List Superfund sites contiguous to the Navajo Nation in New Mexico. These are the Church Rock UNC site and the Pruitt site in eastern Navajo. Those are still handled through Region VI.

At the Bluewater site, which underwent a Superfund removal action, a private mining company was found to bear responsibility for a segment of the contaminated area and to have an active lease for that area. The U.S. EPA was able to compel this responsible party to remediate its area to the same standards adopted for the remainder of the site.

Another part of this Bluewater site was found to be under active land withdrawal status by the U.S. Department of Energy. The DOE accepted responsibility for this section and committed to a full cleanup of this area.

We believe that a similar situation exists at many other sites and that a Superfund-led action can identify the responsible parties and compel them to take the appropriate action and cleanup.

The role of the U.S. EPA, working cooperatively with the Navajo Nation, should be expanded in relation to the problem of addressing abandoned uranium mines.

Aside from the Bluewater site, the involvement of the DOE in the cleanup of abandoned uranium mines has been minimal. On the Navajo Nation, the DOE is primarily involved in the remediation of four uranium mill tailings sites under the authority of the Uranium Mill Tailings Remediation Act.

At the Navajo Nation's request, the DOE has recently invited Navajo Nation to join the Department of Energy's State/Tribal Government Working Group. We believe that this is a first step in the

Navajo Nation's attempt to increase the level of DOE involvement in the cleanup of radioactive waste sites on the Navajo Nation.

The Navajo Nation intends to develop its technical, financial, and legal capabilities to be able to independently monitor and review the environmental restoration and waste management activities being undertaken by the DOE on Navajo Nation lands. At this time, our capabilities are extremely limited.

We are in the process of submitting several proposals to the Department of Energy to help develop this capability. Any assistance that the subcommittees can provide would be greatly appreciated.

The DOE is charged with the administration of the UMTRA program. One percent Federal funding is authorized for work at affected sites on tribal lands. The Navajo Nation has four UMTRA sites. Shiprock and Tuba City have been remediated, while Monument Valley and Mexican Hat UMTRA sites are ongoing.

As authorized by Congress, none of this funding, however, is approvable for cleaning up abandoned uranium mine sites. Therefore, no funding is available for mine reclamation from the DOE.

We have several recommendations that we would like to present to the subcommittees this morning. Our first recommendation is that sites which have already proven eligible for the National Priorities List through site inspections and for which potentially responsible parties exist should be placed as quickly as possible on the National Priorities List.

Number two, sites that are not currently under consideration for the National Priorities List must be allowed back into the Superfund pre-remedial site assessment process. Using the Superfund Accelerated Cleanup Model, quick action should be taken at the worst sites, especially those for which site inspections have been recommended some years ago but no progress has been made. These sites scored under the old Hazard Ranking System should be rescored.

Number three, the Navajo Superfund program and the Navajo AML and OSM—Office of Surface Mining—and U.S. EPA should work together to determine which abandoned uranium mine sites would qualify for and benefit most from a Superfund or CERCLA response. The Navajo Superfund program would then work with EPA Region IX to place these sites on the National Priorities List and to coordinate a Navajo Nation-led Superfund response action.

Number four, we believe the U.S. EPA, DOE, and Office of Surface Mining should fund a series of special studies led by the Navajo Nation which can begin to address the many complex issues related to abandoned uranium mine sites which may include: One, studies of the health effects on nearby residents in cooperation with the Navajo Uranium Mine Workers Office; studies on water quality in mining areas to determine and differentiate the impacts of mining from naturally occurring ore bodies; third, studies on radon emissions from mine wastes and in homes built with the mine wastes; four, to determine natural resource damage assessments; and, fifth, studies on volume reduction and refining of the mine wastes so that a complete cleanup of the sites is possible.

Our fifth recommendation is that the U.S. Nuclear Regulatory Commission, NRC, is active on the Navajo Nation through its licensing authority for uranium mill tailings sites and currently is

looking at an *in situ* uranium mining proposal. The NRC, however, does not have an Indian policy. We recommend that a tribally led working group be established along with representation from the U.S. EPA, the U.S. DOE, and the NRC to create, amend, and help implement the Indian policies of these three agencies, especially as they relate to the issue of radioactive waste disposal on Indian lands.

The Navajo Nation understands that Superfund monies must be used as the fund of last resort. However, certain types of complex abandoned sites, especially one for which responsible parties are still available, can best be handled under CERCLA or Superfund authority. We believe that the companies that operated many of the abandoned uranium mines within the Navajo Nation are still in existence and should be made to return and clean up the wastes.

We are not asking for any special dispensation. We are only saying that there must be equity and the environmental statutes of the United States must be applied equally on the Navajo Nation as elsewhere.

The uranium mine policy implemented by EPA Region IX for the Navajo Nation may have been a good-faith effort to try and conserve Superfund monies, but it has proven a failure and must be changed.

The Navajo Nation itself is best qualified to determine the efficacy of Federal policy that affects its lands. We know that EPA Region IX's uranium mine policy is not working. When responsible parties are available to pay for remediation, Superfund monies are not conserved by avoiding enforcement and cost recovery. Sites that pose considerable threats to human health and the environment need detailed remedial investigations and risk assessments as well as feasibility studies of alternative remediation options. These can only be obtained through the use of Superfund money. SMCRA or the surface mining law cannot provide funding for the detailed studies needed only not to remove the immediate hazards but to alleviate future impacts not currently discernible.

Thank you.

[Prepared statement of the Navajo Nation follows:]



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PETERSON ZAH
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Testimony of the Navajo Nation Before the Subcommittee on Oversight and Investigations and the Subcommittee on Native American Affairs Regarding the Cleanup of Abandoned Uranium Mines and Mine Waste on the Navajo Nation

November 4, 1993

Introduction

Chairman Miller, Chairman Richardson and Subcommittee Members, the Navajo Nation appreciates the opportunity to present our concerns regarding the abandoned uranium mines on the Navajo Nation. We thank the two Subcommittees of the House Natural Resources Committee for their extraordinary commitment in addressing the Navajo Nation's abandoned uranium mine issues and the federal government's response.

The Navajo Nation

The Navajo Nation is the largest and most populous Indian tribe in America with over 219,000 members. The Navajo Nation encompasses almost one-third of all Indian lands in the lower-48 states, with jurisdiction over 17.5 million acres (as large as the state of West Virginia) within the states of Arizona, New Mexico and Utah.

The Navajo Nation is a sovereign nation with a sophisticated three branch government: executive, judicial and legislative. The Navajo Nation has a President, Vice-President and Council elected by the people. The Navajo Nation government structure operates four executive offices and ten divisions, analogous to state and federal departments and/or agencies. The Division of Natural Resources is the tribal division that is responsible for the management and protection of Navajo lands, its resources and the environment. The problem we are seeking your assistance on is that the Navajo Nation's natural resources - - our earth, air and water - - have been contaminated by radioactive and heavy metal-bearing mine wastes. We want these sites remediated.

- The scope of the abandoned uranium mine problem;
- The associated health risks, and why these risks are higher at Navajo sites than others;
- What the current policy is on reclamation of the abandoned uranium mines;
- The limitations of SMCRA's policy;
- What are the roles of federal agencies such as the U.S. EPA, the U.S. DOE, and OSM;
- Recommendations for more satisfactory handling of this situation by the Navajo Abandoned Mine Lands Reclamation Department and the Navajo Superfund Program of the Navajo Environmental Protection Administration.

It is important to remember that while we debate the extent of oversight and responsibility of these agencies, the wastes at the sites continue to contaminate the air, land, and water of the Navajo Nation, and continue to pose an immediate threat to Navajo Nation residents.

I. THE NAVAJO NATION AML PROGRAM

A. Navajo Abandoned Mine Lands Reclamation Program

The Navajo AML Reclamation Department was established and the Reclamation Code promulgated in November 1987. The AML main administrative office is located in Window Rock, Arizona, with two field offices in Shiprock, New Mexico and Tuba City, Arizona. The primary goals and responsibilities of the Navajo AML Department of the Navajo Nation are to 1) reclaim mine lands left abandoned or inadequately reclaimed on the Navajo reservation prior to August 3, 1977 and 2) reclaim those mines where there is no continuing reclamation responsibilities under federal or tribal laws. (Note: a site for which a responsible party exists as defined under the Comprehensive Environmental Responsibility Compensation and Liability Act (CERCLA), or the Superfund statute, does have a continuing reclamation responsibility under federal law). The Surface Mining Control and Reclamation Act (SMCRA) of 1977, Public Law 95-87, vested this authority and responsibility with the Navajo AML Reclamation Department, wherein Section 409(a) of SMCRA states:

"voids, and open and abandoned tunnels, shafts, and entryways resulting from any previous mining operation, constitute a hazard to the public health or safety and that surface impacts of any underground or surface mining operations may degrade the environment. The Secretary, at the request of the Governor or any state, or the governing body of an Indian

From the 1920s to the early 1970s, uranium ore was mined on the Navajo reservation for the U.S. atomic energy program. The primary purchaser and beneficiary of this mining activity was the U.S. government and the development of uranium resources was entrusted to the Atomic Energy Commission. As a result of this mining, the Navajo Nation has been left with at least 1,104 known abandoned uranium mines and tons of hazardous radioactive uranium mine waste scattered across our lands. Many Navajo people live and work in close proximity to highly contaminated soil, and breathe and drink contaminated air and water. Some residents live within a few hundred feet of highly radioactive wastes. Sheep and livestock - the basis for our subsistence - graze on contaminated vegetation and drink contaminated water. Often, Navajo homes are built with radioactive mine waste rocks and children play daily in the vicinity of mines and on mill tailing piles.

The hazards to human health and the environment associated with these abandoned mines are great. These include:

- direct exposure to ionizing radiation;
- direct ingestion of contaminants through on-site exposure;
- inhalation of radon gas and radon daughters emanating from the sites;
- inhalation and ingestion of airborne particulate;
- ingestion of surface water and ground water contaminated with wastes;
- ingestion of contaminated foods produced in areas polluted by the wastes; and,
- physical hazards associated with shafts, boreholes, open pits, and unsafe structures.

The waste piles left behind after uranium mining operations closed consist of waste rock, overburden sub-ore, and ore-grade material. Contaminants in these waste piles include radionuclides such as uranium, along with elevated levels of various heavy metals, such as arsenic, lead, selenium, molybdenum, and vanadium.

While various federal agencies - the U.S. Department of Energy (U.S. DOE), the U.S. Environmental Protection Agency (U.S. EPA) and the Office of Surface Mining (OSM) of the U.S. Department of Interior (DOI) - have made efforts to address various hazards at these sites; no satisfactory solution has been developed that will assure the speedy, thorough and permanent remediation of all sites.

In this testimony, the Navajo Nation will address:

Tribe, is authorized to fill such voids, seal such abandoned tunnels, shafts and entryways, and reclaim surface impacts of underground or surface mines which the Secretary determines could endanger life and property, constitute a hazard to the public and safety, or degrade the environment. State regulatory authorities are authorized to carry out such work pursuant to an approved abandoned mine reclamation program."

Following the Navajo Nation Tribal Council's and the Secretary of Interior's approval of the Navajoland Reclamation Plan in May 1988, the Navajo Nation received its first federal grant from the Navajo Reclamation Share of the AML Reclamation Fund of SMCRA in October, 1988. The Navajo Reclamation Share of the Reclamation Fund is obtained through the authority of Section 402(a) of SMCRA, "[a]ll operators of coal mining operations...shall pay to the Secretary of Interior, for deposit in the fund, a reclamation fee of 35 cents per ton of coal produced by surface coal mining and 15 cents per ton of coal produced by underground mining." Based on these contributions, the Navajo AML Program has received yearly federal grants from the Office of Surface Mining Reclamation and Enforcement (OSMRE). The Navajo Reclamation Share stands at a balance of \$14,112,164 as of September 1, 1993. Since 1988, our annual administrative funding has averaged at approximately \$1.2 million. In addition, our annual construction funding has averaged at \$3 million. SMCRA has been and remains to be the sole source of funding for reclamation of coal and non-coal abandoned mine sites. With proper justifications, OSM has approved Navajo Nation construction grant applications with minimal delays.

B. Coal and Non-coal Activities

The Navajo AML Reclamation Department has been addressing its abandoned coal mine sites since 1991. Additional sites were identified and reclaimed by the Navajo Coal Commission (predecessor to Navajo AML) from 1985 through 1990, after which the Navajo AML assumed responsibility. With a total of 51 abandoned coal mines identified, Navajo AML has reclaimed 30 coal mines, impacting 46.5 acres at a total cost of \$412,917. These coal mine sites ceased operations prior to August 3, 1977, a SMCRA eligibility requirement. With the assistance of OSMRE, we have been able to construe the law to include reclamation of "interim" coal mine sites abandoned prior to September 28, 1984 since the Navajo Nation does not operate a formal and approved Title V Regulatory Program. This exception to the law only applies to coal mine sites and not to abandoned uranium and other non-coal sites. The funding approval of these "interim sites" are subject to the revision of the Navajoland Reclamation Plan and Reclamation Code.

Five large mining areas on the Navajo Nation (AML Mining Districts) are located in Arizona, Cameron, Monument Valley, Black Mesa, in New Mexico, Shiprock and Eastern Navajo. (see Attachment A)

The Navajo Nation, through the Navajo AML Reclamation Department, Initiated a two year inventory and assessment of all abandoned non-coal mine sites from August 1988 to August 1990 (see Attachment B). These non-coal sites, mostly abandoned uranium and copper mines, are located throughout Navajo lands. The Eastern Agency/Crownpoint Mining District has not been inventoried yet. The results of this two year inventory and assessment are presented in Table 1.

Table 1. Inventory of Mining Districts

AML MINING DISTRICT	NUMBER OF MINES	TYPE
1. Cameron & Coppermine	127	uranium/copper
2. Black Mesa	29	uranium
3. Monument Valley	62	uranium
4. Shiprock	786/2 copper	uranium/copper
5. Eastern Agency	+ 100	uranium
Total # of sites	1104 sites (approx.)	

The number of non-coal sites exceeds the coal sites in terms of number of sites and degree of associated hazards. In conformance with Section 403(a) of SMCRA, Navajo AML prioritized its abandoned non-coal sites. SMCRA does not allow reclamation funding of lower priority non-coal sites (Priority II and III) until the Navajo Nation has certified completion of all its known coal problems.

The SMCRA priority system is focused on the problems at the mine site and does not take into account *off-site* problems, such as environmental hazards to nearby residents from contaminated housing materials and soils, or contaminating surface (or ground) water. Nor does this priority system include impacts to off-site sensitive habitats of plant or animals. Therefore, it is possible that sites with a low SMCRA-based priority could yet pose a significant threat to human health and the environment. The Hazard Ranking System developed by the U.S. EPA for use with the Superfund process does, however, attempt to take into account such off-site contamination problems. In fact, the Hazard Ranking System accounts for releases into surface water at downstream distances of up to fifteen miles and more. The Navajo AML anticipates completion of reclamation of all its known coal problems by fall 1994 and to initiate its certification process through the Federal Registry. This certification process entails at least a year of intensive work and the Navajo Nation can then proceed with its Priority II and III non-coal sites. This means that some uranium mine sites, with many known radiological hazards, and off-site impacts, cannot be addressed by the Navajo AML on an emergency basis.

At the present time, all completed and proposed AML projects have been Priority I projects that have been funded entirely by OSM (see Attachment C). The Navajo AML is reclaiming, or proposing to reclaim, solely uranium mines after the Certification of Completion of our coal sites. An in-house radiological cleanup standard specific to Navajo AML needs has been developed prior to commencement of any of our non-coal projects. This cleanup standard is driven primarily by the gamma radiation levels at a site, and may not be entirely consistent with all Applicable Regulations and Appropriate Requirements that must be complied with in a Superfund-driven site remediation. An example is that the Uranium Mill Tailings Remedial Action Project (UMTRA) specifies allowable concentrations of radium-226 in surface soil at given depths below the surface. The amount of subsurface soil sampling that the Navajo AML conducts during a site reclamation is limited by the authority vested in SMCRA.

C. Problems and Recommendations Specific to the Navajo AML

The current plan by OSM is to fund "minimum AML programs," using "state share" set asides for full AML programs. "State Share" refers to the original structuring of the 1977 SMCRA Act, where half of the proceeds of the tax on ongoing coal operations (currently about \$240 million annually) were to be earmarked for reclamation projects in the state/tribe where the tax was collected. The other half, the federal share, is used for specific program responsibilities as determined by the Secretary. An amendment to SMCRA in 1990 stipulated that minimum program states could be funded from either the state, tribal or federal share. The 1992 Energy Policy Act, upon passage, approved the usage of the unappropriated AML balance, about \$722 million, to replenish the failing health benefit fund for retired coal miners. This will also have a greater impact on future levels of funding for AML projects. A lesser amount of available funding will only exacerbate the problems we currently face.

Another serious problem we face is that at many mine sites homes are built with mine waste rocks. The Navajo Superfund Program is one of the tribal programs that could begin to address this problem, but their assistance to the Navajo AML is currently hampered. A complete survey needs to be performed to identify and assess this problem. Each mined area is suspected to contain residences that are built with radioactive mine waste. One good example is at Tse-Tah, a small area in northeastern Arizona that has over 170 AML sites, and has about a dozen residences that have mine waste rock used for home construction. Some of these homes are still occupied.

D. Limitations of SMCRA

Although, the Navajo AML Reclamation Department is fulfilling the duties and responsibilities it has been entrusted with, certain limitations under SMCRA prevent the Navajo Nation from achieving the complete remediation of these sites through a

solely SMCRA-driven effort. SMCRA's limitations are the following:

- SMCRA was written primarily to address the physical hazards at abandoned coal mine sites, such as shafts, pits, highwalls created by mining, acid mine drainage, and waste piles;
- SMCRA was not designed to address the problems of uranium and other non-coal mines, such as water contamination (groundwater and surface), sampling and monitoring needs, off-site migration of contaminants through wind and water, and the severe health risks on nearby residents;
- SMCRA has limited capability to compel the responsible party to pay;
- A SMCRA cleanup will not give the Navajo Nation the ability to file a natural resource damage claim, despite the fact that the Navajo Nation will have suffered grave damages to its natural resources;
- SMCRA does not assess the effects of pollutants on sensitive environments such as wetlands and habitats of endangered species.

All of these problems can be remedied through the use of CERCLA, which is designed to address exactly those problems that SMCRA cannot. Use of the Superfund statute will allow the Navajo Nation to address the many complex environmental issues that exist at the sites, and ensure that the responsible parties pay for their actions.

II. NAVAJO SUPERFUND PROGRAM

A. Scope of the Problem

As mentioned before, the Navajo Nation contains at least 1,104 known abandoned uranium mines. The waste volumes, radon gas emissions, concentrations of radionuclides in the soil, levels of gamma radiation, and the bioaccumulation in the food chain are present and far greater at the abandoned uranium sites than what had previously been assumed in studies mandated by the U.S. Congress. In these representative "scenarios," a maximally exposed individual was assumed to live one mile from the site. At many Navajo sites, residents live within a few hundred feet of highly radioactive wastes. (In some cases, uranium tailings were used as housing construction fill, because it was free, good-sized material). The "scenarios" assume that the major path for human ingestion of uranium mine water and contaminated foods is by eating livestock and vegetables grown at some distance from the mine sites. But, at the Navajo sites, free-range sheep and cows commonly graze upon vegetation growing on the radioactive wastes.

For these reasons, the cumulative risk to human health at the Navajo abandoned mine sites is much greater than that estimated at similar sites in other regions. At many Navajo sites, we believe that the excess fatal cancer risk to the nearby population is greater than one in ten thousand for a two-year exposure.¹ A risk level of one in ten thousand is generally considered unacceptable by the U.S. EPA at a contaminated site, and Superfund emergency response and removal actions are therefore appropriate. For the Subcommittee's background, a paper is attached that discusses some of the major health concerns related to abandoned uranium mines, and problems with earlier studies (see Attachment C).

Superfund pre-remedial assessment actions at abandoned uranium mine sites are currently on hold because of a decision by Region IX to allow the Navajo AML Reclamation Department to reclaim even some of the more critical sites first. We do not have a problem with sites being remediated by the Navajo AML, when they are best qualified to do so - such as, when the sites do not have active responsible parties, do not pose an imminent danger to human health, and are likely to not score very high on the Hazard Ranking System. However, other critical sites should be assessed and rapidly moved through the Superfund process using, for instance, the Superfund Accelerated Cleanup Model.

Such sites, for example, are the abandoned uranium mines on King Tutt mesa in the Carrizo mountains where the Navajo Superfund has conducted Superfund Site Inspections at considerable cost and expense to the federal government, collected and analyzed on-site and off-site environmental samples using all U.S. EPA protocols and certified laboratories, and proven through factual data that the sites score very high on the Hazard Ranking System. The U.S. EPA has determined that these sites do not need to be listed on the Superfund National Priorities List. Such decisions on whether to proceed with Superfund actions at a potential Superfund site is under the sole authority of the U.S. EPA. Although, the U.S. EPA consults with its cooperative agencies, such as tribal and state Superfund programs, the determination on whether a site moves forward within the Superfund process and to defer the site to a Navajo AML reclamation is a decision that has been made by the U.S. EPA, and not at the request of the Navajo Nation. This decision is detrimental to the interests of the Navajo Nation and we believe, contrary to the intent of the Congress, in framing SMCRA (under which the Navajo AML Reclamation Department operates) and CERCLA (or Superfund, under which the authority the Navajo Superfund Program of the Navajo EPA operates). Other U.S. EPA Regions, such as Region VI, do not hesitate to process abandoned uranium mines through Superfund assessments, and aggressively pursue Superfund actions at abandoned uranium mine sites.

¹Risks at sites containing hazardous substances are estimated as a chance of excess, or additional, fatal cancers contracted by humans due to exposure to toxic materials at the site. An excess risk of one in ten thousand means that if ten thousand people were exposed to the hazard, there is a great likelihood that one would contract fatal cancer.

B. Navajo Superfund Responsibilities

In October, 1988, the Navajo Nation was granted "Treatment as State" (TAS) status and awarded U.S. EPA grant funds through a Superfund Memorandum of Agreement from U.S. EPA Region VI. The Navajo Superfund Program was created to "assess and respond to potential or actual hazardous releases and to ensure that adequate action, through public participation, is undertaken to protect public health, welfare, and the environment on the Navajo Nation. Under the authority of CERCLA, the responsibilities of Navajo Superfund include:

- Site discovery, inventory, and prioritization;
- Preliminary Assessments for threats to public health and the environment;
- Site inspections to determine site placement on the National Priorities List;
- Emergency response to releases or threatened releases of hazardous substances at sites such as abandoned mines, herbicide storage areas, sheep dip vats, oil field pits, and gasoline service stations;
- Compliance monitoring of work at existing Superfund sites on or adjacent to Navajo Nation boundaries; and,
- cost recovery for clean up costs from any or all of the responsible parties.

Federal oversight was originally provided by EPA Regions VI, Region VIII and IX; however, in 1991, jurisdiction over the entire Navajo Nation was transferred to U.S. EPA Region IX through a Superfund Memorandum of Agreement. Funding for the Navajo Superfund Program for the current year is summarized in Table 2.

Table 2. Navajo Superfund Program Current Funding Levels

Agency	Funding Level	Fiscal Year
U.S. EPA Region IX	750,700.00	FY 93-94
U.S. EPA Region VI	40,000.00	FY 94
Navajo Nation	87,781.00	FY94
Total Funding	878,481.00	

C. Current Policy

Between 1989 and 1993, Navajo Superfund completed the Preliminary Assessment step of the Superfund process for forty-two abandoned uranium mine sites. Most of the Site Assessments were done under a Memorandum of Understanding (MOU) with Region VI. These sites were then assigned a score using the Superfund Hazard Ranking System. Eleven sites (based on their low score) were deemed to require No Further Remedial Action Planned.

Twenty-eight out of the forty-two sites scored over 28.5 on the Hazard Ranking System². Twenty-three of these sites qualified for the "Site Inspection" stage of the Superfund process, which further refines the Hazard Ranking System score to determine whether the sites qualify for placement on the Superfund National Priorities List. Seven site inspections were completed through field collection of environmental data. Other site inspections were completed using existing data. Many sites that should have had site inspections conducted still need to be evaluated for placement on the NPL.

D. Need for Policy Change

The Navajo Nation recommends that the abandoned uranium mine sites should be apportioned between Navajo Superfund and Navajo AML, so that the sites can be addressed expediently, completely and permanently as possible. This cooperative effort is necessary because the environmental problems posed by such sites, and the natural resource damages suffered by the Navajo Nation, are too great for Navajo AML to manage without other support.

According to the Draft Strategy developed at the Interagency Meeting, January 22, 1992 (see Attachment E), any sites ineligible for SMCRA (post-1977 sites) are to be either funded by the Navajo Nation through enactment of a Navajo Nation Environmental Response Law, which has not been formulated yet, or referred to EPA Region IX for hazard ranking evaluation or emergency removal assessment.

A Cooperative Agreement between Navajo AML and Navajo EPA was developed and entered into April 1993 (Attachment F). This agreement serves as a mechanism to address all abandoned uranium mines. Sites which are not eligible for reclamation by any one of the departments are referred to the other department, and vice versa. The agreement formalizes the exchange of pertinent information related to mine sites between the two departments.

Sites which are potentially eligible for the National Priorities List should be

²Sites ranked under the old Hazard Ranking System which scored less than 28.5—the threshold value for being placed on the National Priorities List—but greater than 25 points were included. This was based on the fact that the new Hazard Ranking System yields higher scores than the old for equivalent sites.

handled by Navajo Superfund, and must be considered ineligible for remediation by Navajo AML. Although the Navajo AML does excellent work, there are limitations on the extent of remediation that can be performed under the authorization of SMCRA.

All of these problems can be remedied through the use of CERCLA, which is designed to address exactly those problems that SMCRA cannot. CERCLA can address the threats to human health and the environment by ensuring that the many complex environmental issues that exist at the abandoned uranium mine sites are treated, and that full public participation takes place. Such Superfund action has been taken by the Navajo Nation and Region IX, at the Bluewater uranium mine site, where the Agency for Toxic Substances and Disease Registry had issued a Public Health Advisory. An emergency response action was taken at this site. The full range of off-site contamination problems at Bluewater still have to be addressed through remedial action. Since the Bluewater project, however, conducting further Preliminary Assessments or proceeding onto the Site Inspection stage for the uranium mine sites has been stalled.

E. Roles of Federal Agencies

1. Involvement of the U. S. EPA

Region IX provides all federal oversight for the Navajo Superfund Program, with the exception of monitoring duties at two National Priority List Superfund sites contiguous to the Navajo Nation in New Mexico. At the Bluewater site, which underwent a Superfund removal action, a private mining company was found to bear responsibility for a segment of the contaminated area, and to have an active lease for that area. The U.S. EPA was able to compel this responsible party to remediate its area to the same standards adopted for the remainder of the site. Another part of the site was found to be under active land withdrawal status by the U.S. Department of Energy (U.S. DOE). The U.S. DOE accepted responsibility for this section, and committed to a full cleanup of this area.

We believe that a similar situation probably exists at many other sites, and that a Superfund-led action can identify the responsible parties and compel them to take appropriate actions. The role of the U.S. EPA, working cooperatively with the Navajo Nation, should be expanded in relation to the problem of abandoned uranium mines.

2. Involvement of the U.S. DOE

Aside from the Bluewater site, the involvement of the U.S. DOE in the cleanup of abandoned uranium mines has been minimal. On the Navajo Nation, the U.S. DOE is primarily involved in the remediation of four uranium mill tailings sites, under the authority of the Uranium Mill Tailings Remediation Act. At the Navajo Nation's request, the U.S. DOE had recently invited the Navajo Nation to join the Department

of Energy's State/Tribal Government Working Group. We believe that this is a first step in the Navajo Nation's attempt to increase the level of U.S. DOE involvement in the cleanup of radioactive waste sites on the Navajo Nation. The Navajo Nation intends to develop its technical, financial, and legal capabilities to be able to independently monitor and review the environmental restoration and waste management activities being undertaken by the U.S. DOE on Navajo lands. At this time, our capabilities are extremely limited. We are in the process of submitting several proposals to the Department of Energy to help build our capability. Any assistance the Committee can provide will be greatly appreciated.

The U.S. DOE is charged with the administration of the UMTRA. One hundred percent federal funding is authorized for work at affected sites on tribal lands. The Navajo Nation has four UMTRA sites. Shiprock and Tuba City have been remediated while Monument Valley and Mexican Hat UMTRA sites are ongoing. As authorized by Congress, none of the funding are approvable for cleaning up abandoned uranium mine sites. Therefore, no funding is available for mine reclamation from the U.S. DOE.

RECOMMENDATIONS

The recommendations of the Navajo Nation with regard to its abandoned uranium mine sites are the following:

1. Sites which have already proven eligible for the National Priorities List, through Site Inspections and for which potentially responsible parties (PRP) exist, should be placed as quickly as possible on the National Priorities List.
2. Sites that are not currently under consideration for the National Priorities List must be allowed back into the Superfund pre-remedial site assessment process. Using the Superfund Accelerated Cleanup Model, quick action should be taken at the worst sites, especially those for which Site Inspections have been recommended some years ago, but no progress has been made. Those sites scored under the old Hazard Ranking System should be rescored, which could result in higher scores.
3. Navajo Superfund and Navajo AML, and OSM and U.S. EPA, should work together to determine which abandoned uranium mine sites would qualify for and benefit most from a Superfund response. Navajo Superfund would then work with U.S. EPA Region IX to place these sites on the National Priorities List, and to coordinate a Navajo Nation-led Superfund response action.
4. The U.S. EPA/DOE/OSM should fund a series of special studies led by the Navajo Nation which can begin to address the many complex issues related to abandoned uranium mine sites, which may include:
 - Studies of health effects on nearby residents, in cooperation with the

Navajo Uranium Mine Workers Office;

- Studies on water quality in mining areas, to determine and differentiate the impacts of mining from naturally occurring ore bodies;
- Studies on radon emissions from mine wastes and in homes built with mine wastes;
- Natural resource damage assessments;
- Studies on volume reduction and refining of the mine wastes so that a complete cleanup of the sites is possible.

5. The U.S. Nuclear Regulatory Commission (NRC) is active on the Navajo Nation through its licensing authority for uranium mill tailings sites and in-situ uranium mining sites. The NRC, however, does not have an Indian policy. We recommend that a tribally-led working group be established, along with representation from the U.S. EPA, the U.S. DOE, and the NRC, to create, amend and help implement the Indian policies of these three agencies, especially as they relate to the issue of radioactive waste disposal on Indian lands.

We understand that Superfund monies must be used as a fund of last resort; however, certain types of complex abandoned sites, especially one for which responsible parties are still available, can best be handled under CERCLA authority. We believe that the companies that operated many of the abandoned uranium mines within the Navajo Nation are still in existence and available to return and clean up the waste.

We are not asking for any special dispensation; we are only saying that there must be equity, and the environmental statutes of the United States must be applied equally on the Navajo Nation as elsewhere. The uranium mine policy implemented by Region IX for the Navajo Nation may have been a good faith effort to try and conserve Superfund monies, but it has proven a failure and must be changed.

The Navajo Nation is best qualified to determine the efficacy of Federal policy that affects its land. We know that Region IX's uranium mine policy is not working. When responsible parties are available to pay for remediation, Superfund monies are not conserved by avoiding enforcement and cost recovery. Sites that pose considerable threats to human health and the environment need detailed remedial investigations and risk assessments, as well as feasibility studies of alternative remediation options. These can only be obtained through the use of Superfund. SMCRA cannot provide funding for the detailed types of studies needed to not only remove the immediate hazard but to alleviate future impacts not currently discernable.

CONCLUSION

The Navajo Nation greatly appreciates the interest and work of this Committee to investigate the abuse of our environment and people that has gone on for over half a century. We are continuing to pay an enormous price. The United States government set the policy for extraction of uranium ore and it is only right and reasonable that it take responsibility and leadership in cleaning up our lands and environment. All we ask is to be a partner in this effort.

We look forward to working with the Subcommittees and various federal agencies on this important matter in the coming months. We can no longer afford to have our children think an abandoned uranium mill tailing site is their sandbox or playground. Otherwise, another generation of Navajo people will be debilitated like their fore fathers who extracted the ore and who are no longer with us.

Mr. MILLER. Thank you very much for your testimony.

Let me ask you a couple of technical questions so I can get a handle on where we are at the moment.

Of the roughly a little over 1,000 mines you testified to, Ms. Roessel, that are on the Navajo reservation, how do you rank those in terms of their danger and the hazard that they pose and the priority? Have you gone through that process, Ms. Hoskie?

Ms. HOSKIE. Yes, we have. Out of the 1,104 sites, we have looked at 42 of these sites, and we have ranked them using the EPA Hazard Ranking System.

Mr. MILLER. That is 28 of those.

Ms. HOSKIE. Right. The 28 scored above the 28.5 necessary to—that is what EPA considers one of the worst sites in the country and is eligible for placement on the NPL.

Mr. MILLER. And in some cases well above the 28.5, right?

Ms. HOSKIE. Yes, very much well above the 28.5.

Mr. MILLER. And that theoretically makes them eligible for CERCLA funding?

Ms. HOSKIE. Yes.

Mr. MILLER. And the remaining sites, what source of potential funding is available to those sites that are still believed to be a hazard but don't qualify under the rating system?

Ms. HOSKIE. The AML program?

Mr. MILLER. Yes.

Ms. HOSKIE. Abandoned mine lands program?

Mr. MILLER. That would take in the remainder of those sites, correct?

Ms. HOSKIE. That could be used as one option. The other option would be for the Navajo Nation itself to begin to address some of those.

Mr. MILLER. As I understand the AML funding, that comes through SMCRA, correct?

Ms. HOSKIE. That is correct.

Mr. MILLER. Now to get the full availability of SMCRA money for this purpose, you are in the process of completing your certification program, winding up the coal reclamation part. Is that correct?

Ms. HOSKIE. That is correct. I believe my colleague, Mr. Charlie, will address that issue.

Mr. MILLER. If you could, please, where are you in the process? Because once you get the certification, then you will be able to use the full allocation for the AML program here. Is that correct?

Mr. CHARLIE. Yes, sir.

Mr. MILLER. Could you tell me where you are in that process?

Mr. CHARLIE. The Office of Surface Mining recently funded the last 16 projects that are proposed under the coal cleanup projects. Once that is completed, the time frame allowed under that is approximately six months. Thereafter, we can start the certification process, and I believe that takes about a year. So we figure around a year and a half of—well, six months of work and a year of certification process before we complete our certification process.

Mr. MILLER. That would allow what revenues from SMCRA to be available to clean up these mines then after certification, do you anticipate?

Mr. CHARLIE. We can actually go into reclamation of our Priority II and III non-coal sites, as SMCRA calls them.

Mr. MILLER. You would have money after certification?

Mr. CHARLIE. Right. Right now we are limited to priority one, those sites that pose extreme hazard.

Mr. MILLER. But that would make available to you what amount of money for that purpose from SMCRA do you anticipate?

Mr. CHARLIE. Currently, we have around \$14 million in our share, so we can have access to a greater percentage of that portion.

Mr. MILLER. Now, you have addressed this in your testimony, but in the case where you have an AML site but you have external hazards and problems from that site, as I understand the SMCRA source of funding, you cannot deal with problems off-site. Is that correct?

Mr. CHARLIE. Yes. During the process of our prioritization scheme and the determination of the project area boundary, those physical hazards that are directly associated with the AML site are addressed. They are abated. But if it is off-site, we cannot basically touch those.

Mr. MILLER. So what do you do? You negotiate with the Federal Government over the project site, the definition and the description of the project site?

Mr. CHARLIE. Those hazards, basically, will have to be addressed once we complete our certification process, when we complete all of our non-coal problems. That is where it stands right now, sir.

Mr. MILLER. So what funding would be available to you to address those hazards that exist off of the project sites where you want to engage in cleanups, but AML funds are not available to go off the project site? What funding source would be available then? Would that have to come from the Nation's treasury?

Mr. CHARLIE. From the Superfund program.

Mr. MILLER. So then you would meld that into the Superfund program?

Mr. CHARLIE. Yes, sir.

Mr. MILLER. Does that require that that project site be qualified as a Superfund site?

Mr. CHARLIE. If it meets the criteria, yes.

Mr. MILLER. What about the ones that don't but still have external hazards, whether it is dust blowing or—

Mr. CHARLIE. That is an area that, hopefully, will be resolved through this hearing here. There may be other funding sources that can be made available. We do have sites like that out on the Navajo reservations where a parcel of land that may have been used as dumping areas, dumping grounds from the mining days. Those sites basically we cannot touch because they are not directly associated with the abandoned mine sites.

Mr. MILLER. Can you explain that a little bit more for me?

Mr. CHARLIE. Okay. The companies that were out in the abandoned mine sites, a lot of them when their trucks broke down or for preventive maintenance measures would set aside a certain area outside of the mine areas and use that area for dumping of the radiological ore.

These sites cannot be addressed. We have no avenues. We have no funds available to address those. So essentially these will have to remain until such time monies are appropriated.

Mr. MILLER. So those are sort of orphans within any program? I mean they would not qualify either under SMCRA or under CERCLA? They would not qualify either way?

Mr. CHARLIE. In my opinion, no.

Mr. MILLER. Where are you with reclaiming the Priority I sites?

Mr. CHARLIE. I believe I have a table attached to my statement here. We have done quite a bit of work. Out of the approximately 1,100 mines, Navajo AML has reclaimed 171 Priority I non-coal mines on the Navajo reservation. This is between November 1991 and August of 1993.

Mr. MILLER. All right. To put this in perspective, including the last 10 years, when you give a report to the tribal government with respect to the 42 sites, what is the time line that you anticipate in terms of when the cleanup of these would be accomplished as things proceed now?

Ms. HOSKIE. The 42 sites that we mentioned?

Mr. MILLER. Yes.

Ms. HOSKIE. I would like to defer that question to Dr. Rajen.

Mr. MILLER. Dr. Rajen?

Dr. RAJEN. Thank you very much. I would like to thank the Navajo Nation for giving me this opportunity to be here, and also to the subcommittees for their interest in the subject.

I would like to say, you know, I have a personal interest in this. My wife is Navajo, our son is Navajo, and I feel responsible in some sense to ensure a clean environment for my family. And I would just like to say that I have learned an enormous amount through having worked with the Navajo Nation.

Of the 42 sites that you mentioned, they are at some very preliminary stages of the Superfund process, but essentially the Superfund site assessment work is on hold.

However, we believe through an initial survey of the mine sites, through a site prioritization effort in which we tried to earmark the worst sites first by looking at their proximity to populations, to surface water drainages, to sensitive environments, that we were trying to address some of the worst sites first. We found that many of these sites are actually in the same geographical area, have principally the same company that operated the mines, impact the same people, the same sensitive environments, impact the same aquifer, which means in a sense that some of these sites could be aggregated into one site, and the U.S. EPA has done this at several Superfund sites around the country. In fact, they have sites that can span hundreds of miles. You know, some in the Pacific Ocean.

So we feel that actually we may be talking about a few key aggregated sites which ought to belong on the Superfund list. I have personally walked at many of these sites, taken radiation measurements. We have collected samples, and what we have found is that under SMCRA, essentially, the Navajo Abandoned Mine Lands Program can do gamma radiation surveys. They cannot really take adequate soil samples, subsurface samples, water samples.

When Perry says that they have reclaimed sites, they might very well have—even though they want to do more, close some of the

shafts, take care of some of the physical hazards, but they haven't been allowed to fully assess the sites.

And I did a preliminary assessment of a site that had a State abandoned mine lands reclamation done. The State abandoned mine lands program at one time used to reclaim allotted land sites where there were Navajo allottees. Well, they had reclaimed the site, and we did a preliminary assessment under Superfund, and Region VI recommended a site inspection, which means they moved it forward one step farther. So it had been reclaimed, but it went into the next stage.

And of those 42 sites, they are essentially on hold, and I think we should focus on the two groups of sites that you very well brought out. That there are sites that would rank on the Superfund list and some that would drop out. But I think we should focus primarily now on those sites that could make it to the NPL, that ought to have been on the NPL, that have gone through the first two assessment stages, have ranked very high, and are now essentially at a stage that is called the HRS—the Hazard Ranking System—package preparation.

And sites that drop out of the system could be addressed through a Navajo Superfund law. States have their own Superfund statutes to step in when the Federal statute drops out.

So, essentially, to be more to the point, and I am sorry if I have been longwinded, those 42 sites are really on hold. You know, there isn't much happening at those sites.

Mr. MILLER. Why is that?

Dr. RAJEN. Well, I think essentially because they are supposed to be addressed by the Navajo AML first, and this is a problem of, perhaps, misinterpretation or, you know, misperception of what reclamation means and what cleanup means.

Also I would venture to say these are complex sites, you know. These aren't sites that are as clearly identifiable such as a pool of bubbling black chemicals near a schoolyard. You go out to one of these sites, and if you come from a region that doesn't have many radioactive waste problems, it is easy to walk on the site and see a nice rural, spectacularly beautiful setting, which many of these sites are in.

So I think there has been a problem of recognition amongst agencies responsible for the cleanup. You know, you have to really walk out there with a radiation counter, take the samples, run the risk assessments to see kind of risks are at these sites.

So I think that this hearing will play the useful role to see how we can move forward. I don't want to dwell on the past but—

Mr. MILLER. I am not that familiar with how the Superfund law or CERCLA have evolved over the years, but what are the rights of the Navajo Nation and what would the rights be of the States to push that process? Are you essentially standing in line waiting for allocations of funds for characterization and that is the position you are in, or how is that done?

Dr. RAJEN. Sadie, would you like to answer that?

Mr. MILLER. The characterization of funds, do you have to drive that with your funds also?

Dr. RAJEN. Yes, there are some matching funds that the Navajo Nation applies toward such Superfund site assessments. I will re-

strict my answer to the Superfund issue and perhaps Perry could handle the other questions.

But essentially you're right. You have to stand in line. You know, the EPA, of course, have to deal with the fact that they have a large universe of sites, and not enough funds for all sites. So essentially I would say they enter into cooperative agreements with tribes, just as they do with States, and come up with a certain amount of money that is available and then estimate a number of sites that could be addressed.

At this time, the Navajo Superfund program is not proposing any more abandoned mines to be assessed. That is on hold. They don't put up any more uranium mines to be assessed. All of these mines that were assessed were done in the past, primarily through Region VI.

Mr. MILLER. Ms. English? Thank you.

Ms. ENGLISH. I have a few questions, maybe they are semantic more than anything else. When we are talking about the Navajo Superfund site or Navajo Superfund, is that basically the same thing as EPA Superfund or are we talking about two different things?

Ms. HOSKIE. Let me try to answer that. We are funded by the EPA to develop our own Superfund program, modeled very much like the Federal Superfund program, and we have received this funding since 1988.

We are not at the same stage as the Federal Superfund program. So it is a cooperative arrangement during this period where we do the site discoveries. We go out and look at what sites need to be assessed. We do all of that. We negotiate with EPA up front, I should say, how many preliminary assessments we will do in a given year depending on the funding that we get. Say this year we will do maybe 45 preliminary assessments and 10 site inspections.

They are very arbitrary numbers that are given, and those are the targets that we meet during that year under our grant. And at the same time, we have two sources of grant. One is the preliminary assessment, site inspection money. The other one is a core grant which is to develop an administrative body or system like the Federal EPA that would begin to develop a cost recovery program where, when we go out and address sites for cleanup, we can seek payment from the responsible parties.

This would mean developing our own laws, our own Superfund laws, hazardous waste laws which we are in the very beginning stages of doing. We don't have a Navajo Nation Superfund law yet, and we don't have a cleanup fund, a revolving fund. So we are relying for a large part of the assistance from EPA during this developmental mode.

Ms. ENGLISH. If EPA had to do the assessments and related process without the Navajo Superfund, would it be faster or slower than the Navajo Nation developing a duplication of the process?

Ms. HOSKIE. I think it would probably be slower, because we are more familiar with the sites and where development took place on the Navajo Nation, and we kind of know where all of the sites are.

Ms. ENGLISH. Is there a limit on the expertise that the Navajo Nation has been able to put together or pull together to develop the Superfund? I am not thinking of just the assessments, but develop-

ing the laws which I know for a fact are very comprehensive, very complicated. You mentioned going after the folks that may have caused the problem in the beginning. Do you have the resources to develop all of the support folks that you need to do this in a comprehensive way?

Ms. HOSKIE. We have a real deficiency of technical expertise at the Navajo Superfund program. We have some excellent workers, but the learning curve is very steep.

What we have been able to do is negotiate intermittent IPA assignments from EPA Region IX, people to come out from the regional office to work with our staff on a short-term, or in some cases long-term, basis to render this assistance, and one of the ways that the internal Navajo Nation Memorandum of Agreement came into being that says any abandoned uranium mine sites will be sent over to the Navajo AML department to reclaim was actually done by one of these IPAs from EPA Region IX.

So in a sense the perception is almost that we know how best to do your program for you, so we will do it for you, but not with you. It is been a year or so now that that happened, and now we are saying, "Well, wait a minute. These sites, even though we defer them, they are not being cleaned up as completely as we would like and as we think should be handled under the CERCLA program where there is a wider, more comprehensive cleanup." So we don't really agree sometimes with the technical assistance that we get.

Ms. ENGLISH. Mr. Charlie, you mentioned that it takes a year and a half to certify. Why does it take that long? Does this go back to the question of expertise that Ms. Hoskie was talking about or is it a result of working with EPA?

Mr. CHARLIE. I anticipated about a year and a half of work left; I mean activities left before we can certify completion. That year and a half includes the reclamation of the remaining 14-16 coal mine sites. So I am including that.

So I figure about a year of intensive work, PR work, getting the certification through the Federal Registry before we can see the certification.

Ms. ENGLISH. And when a site is certified, it then will be added to this list along with these other 40 sites that are just kind of in a holding pattern? Do I understand that correctly, or have I confused this?

Mr. CHARLIE. The certification process would essentially tell the Federal Government that the Navajo Nation has certified completion of all of its non-coal problems.

Ms. ENGLISH. Coal. I am sorry. Okay.

Mr. CHARLIE. Right. And then it can start going to the other, what SMCRA calls, non-coal problems which we are talking about, the 42 sites that Sadie is referencing and all of the other abandoned uranium mines on the reservation.

Ms. ENGLISH. Do you feel that the certification process could be faster if you had additional help?

Mr. CHARLIE. Definitely yes.

Ms. ENGLISH. What kind of help would you request?

Mr. CHARLIE. If we can handle a lot, the Navajo Nation can handle a lot of the requirements at our level in terms of public meet-

ings. We have already started that process where we are going to the impacted areas and having them come forward to identify any other remaining sites that may be necessary.

When it gets to the Washington, DC, level I don't know how many processes or how many layers of bureaucratic acknowledgments or approval it has to go through. If those can be lessened or expedited, then we would have the certification process performed in a more timely manner.

Ms. ENGLISH. In the areas of coal and uranium, what happens when a site is either identified or certified for reclamation and the money isn't there to reclaim it or to cap it or whatever is going to happen with that site?

Is there some protection on those sites for the public while the sites have been certified or documented on paper but nothing has been done yet because of funding. Is there some way where there is protection on those sites?

Mr. CHARLIE. Are you referencing our abandoned uranium mines or—

Ms. ENGLISH. In either case. Wherever there might be a hazard.

Mr. CHARLIE. Okay. With the certification process being completed on coal, the coal problems, essentially the Navajo Nation would say that we have completed.

Ms. ENGLISH. So certification means you have done the reclamation?

Mr. CHARLIE. On all non-coal problems.

Ms. ENGLISH. Okay. Then on the uranium sites, are there sites that are pending that need some protection while the funding process is implemented?

Mr. CHARLIE. Yes.

Ms. ENGLISH. Yes.

Mr. CHARLIE. We have sites that pose various degrees of physical hazards, high walls, open adits, open shafts. Access is readily available to youngsters or children, the Navajo sheepherders, or livestock. We have no warning signs out there in these mine areas to warn the general public and also the local residents. In addition to these obvious physical hazards, we do have a tremendous amount of radiological hazards associated with these mines.

Ms. ENGLISH. Once the sites are indentified, how soon are safety precautions taken?

Mr. CHARLIE. Once we identify and determine that an abandoned mine, or uranium mine in this case, is a Priority I mine, it usually takes once we develop our construction grant application approximately 6-10 months to get it funded. And for the in-house construction crew or the contractor to get out into the project area it usually takes about another month. So around 11-12 months before we can actually start doing the project.

Ms. ENGLISH. How successful is the Navajo Nation on recouping revenue from the companies that did the original mining, either coal or uranium? Has there been much success in the legal area?

Mr. CHARLIE. Not through SMCRA—that is part of my testimony—where SMCRA has very limited capability to compel the responsible parties, in this case mining companies, to pay for damages unless we can demonstrate and prove that there is a contin-

ually responsible party under tribal or Federal laws that can do the reclamation.

Keep in mind some of our mine sites here, especially the abandoned uranium mine sites, the companies were very small, I guess mom-and-pop-operation-type thing. It has basically gone under. They are no longer in existence. Some of the major companies like Kerr-McGee or VCA are still in existence, but at the time they were doing the mining they were not really required to do a full-scale reclamation. So it wasn't until the passage of SMCRA where we started going in.

The companies, most of them are out. The majority of the 1,100 mines that we have identified, abandoned uranium mines, we have documented that these mine lands are left inadequately reclaimed and we have demonstrated that there are no continuing reclamation responsibilities of any party.

So SMCRA basically allows us to demonstrate that first, and then they allow funding of these AML sites. To date, we have not had an opportunity to tell one particular company to go back and to do any reclamation on any of our AML sites.

Ms. HOSKIE. Can I also add to that? One of our recommendations or one of the things we want to raise in this hearing, is that compelling a responsible party to pay is allowable under the Superfund statute and is a limitation under SMCRA.

And I would like Dr. Rajen to further comment on our experience, Navajo Nation's Superfund's experience, with that concept.

Dr. RAJEN. Thank you, Sadie. I would just like to point out that under SMCRA, if the company is no longer in operation, they can't really compel the mining company to return. But under Superfund there is joint and several liability and also historic liability. So we have found some sites where the company has been acquired by a larger company which has merged with a multinational. So we believe that there are very large corporations which have bought up some of these leases and acquired them with the intention of future profits. So under Superfund there is liability.

And at the Bluewater site we found, actually the U.S. EPA Region IX found at least three potentially responsible parties. One was a private company, one they found was the Department of Energy, and the other, I think they are trying to recover some cost from the Department of the Interior, from the Bureau of Indian Affairs.

So we believe actually that the type of responsible party search that is done under Superfund hasn't yet been done for all the sites. But our preliminary investigations have shown that many of these companies are still in existence, have been acquired by others, and have merged into large corporations. So we believe there are responsible parties.

And I would like to say my own feeling is that if even one of these sites, perhaps an aggregated site, became a Superfund site, I believe there would be a line of companies ready to do voluntary cleanup and avoid being on the Superfund list. So actually, if we could get one site, even one site on the Superfund list, we could then talk to the other companies from a position of strength and say, "Look. Let's clean it up, we won't put you on the list."

And States do this all the time. Many States have taken the lead to work through voluntary cleanup, and I think that has been the good part of Superfund. That companies don't want to pollute. They want to come back in and clean house.

And I feel that could be the key that they are looking for. Let's put a few sites on the list and see who turns up, comes out of the woodwork.

Ms. ENGLISH. Just one last question, and Ms. Roessel might be able to answer this. What has been the relationship between the Navajo Nation and the BIA? Has the BIA offered any assistance?

Ms. ROESSEL. As far as I know there's not been, really, any assistance, and perhaps Perry or Sadie might be able to disagree or agree with me. I think that the Bureau of Indian Affairs has very different responsibilities and perhaps does not get into the area. Because when you talk about reclamation activity, for example, that is under the Office of Surface Mining.

So the Department of the Interior, obviously, is where the Bureau of Indian Affairs is as well, but it is another agency within that Department.

I don't know if Sadie or Perry have any other comments.

Ms. HOSKIE. Raj, I think—

Ms. ENGLISH. Dr. Rajen.

Ms. HOSKIE. At the Bluewater site I believe there was BIA involvement. Maybe you can expand on that.

Dr. RAJEN. Yes. In a sense, the Bureau of Indian Affairs signs off on the leases for such activities on Indian reservations, and then bears responsibility because they, in a sense, allowed the company to leave.

And I think that could be questionable, you know, because my understanding is that it is still being debated by attorneys, but there is responsibility because essentially the Bureau of Indian Affairs signs off on the leases.

Ms. ENGLISH. One last question. Has the Navajo Nation thought about or talked about mining reclamation policies on Navajo lands? Or developing a policy?

Mr. CHARLIE. The Navajo AML Reclamation Department is in the process of revising its reclamation code and a reclamation plan, and the reclamation portion will be done. That is part of the requirement of the certification process.

Ms. ENGLISH. Mr. Charlie, is that site-specific or is it an overall policy for Navajo lands? For instance, the State of Arizona right now is developing some reclamation policies for the first time ever.

Does the Navajo Nation's code address an overall reclamation policy or is it a policy that is site-specific for cleanup or a particular problem?

Mr. CHARLIE. It covers the Navajo Nation as a whole. It is not site-specific where we have to do certain things within the site. It basically follows the general outline of SMCRA.

Ms. ENGLISH. Okay. Thanks very much.

Mr. MILLER. If I can go back to these 42 sites and the 28 that you say meet the requirements of CERCLA. Why is it again that none of these have made the National Priorities List?

Ms. HOSKIE. We don't really know. What we do from the Navajo Superfund program is we look at the site, and we put forth our

best recommendation on a score, which is in these cases well above the 28.5. We send those over to EPA and that is where that decision gets made on whether to put them on the NPL or to just leave them.

Mr. MILLER. That was sent when?

Ms. HOSKIE. Dr. Rajen?

Dr. RAJEN. Several years. You know, at least 2 years ago.

Ms. HOSKIE. I should point out here that perhaps some of the delay was because we changed regions. The Navajo was, prior to 1991, working with three EPA regions, and a lot of these preliminary assessments on these 42 sites were done under Region VI. That was before my time at Navajo EPA, and from what I am told Region VI was willing to place the sites on the NPL. Unfortunately, at that time we made the shift over to Region IX, and that willingness to place the sites on the NPL did not follow through with that move.

Mr. MILLER. Well, that is an interesting discussion. I am not sure that is a valid reason.

What is it you have been told coming back the other way from EPA as to why? I assume you have pursued over the last couple of years some determination as to whether or not some of these sites, either combined or in their current state, would qualify for the National Priorities List. What have you been told coming back the other way from EPA? I don't care what region.

Ms. HOSKIE. Well, right. That they should be handled by AML. They should be reclaimed by our Abandoned Mine Lands department.

Mr. MILLER. But as I read the material, and as I read your testimony this morning, AML will not let you deal with these sites in a comprehensive manner in which to clean them up. And, in fact, you have dealt with some Priority I sites, have you not, that you have described as Priority I sites, and under AML, you still have all kinds of additional problems related to those sites because of the restrictions of AML; is that correct?

Ms. HOSKIE. That is correct.

Mr. MILLER. So that is kind of a non-answer.

Ms. HOSKIE. Right.

Mr. MILLER. And that has been going on for two years?

Ms. HOSKIE. Yes.

Mr. MILLER. And my limited understanding of the CERCLA process is if you are not on the National Priorities List then you don't get in line for national monies?

Ms. HOSKIE. That is correct.

Mr. MILLER. When they tell you that you belong on AML is that a verbal; is that a written? Do they outline where the deficiencies are or what the information is that is lacking or the characterization of the site that is necessary that these sites don't meet? How is this process engaged in?

Ms. HOSKIE. It is articulated in the internal Navajo Nation Memorandum of Agreement that says any abandoned uranium mine sites that are eligible under SMCRA—they were abandoned before 1977—will be handled by the Navajo mine lands program, period. I mean no assessments, no "Well let's see what else we can

do," "Could there be an apportionment of responsibility and clean-up."

But basically, I think the thought was that there is a duplication of effort here, so why not just let one department handle it, restrictions, limitations, regardless. Let's just refer that to one tribal department. And that is what we are trying to change here today.

Mr. MILLER. If EPA were successful in that effort, they also not only would refer you to one department, they would also keep from having to spend Superfund money on these sites.

Ms. HOSKIE. Correct.

Mr. MILLER. So that money would then be available for off-reservation sites elsewhere in the region.

Ms. HOSKIE. Yes.

Mr. MILLER. Okay.

Mr. Charlie, let me ask you just kind of an aside here, but I believe cleanup is being done by Department of Energy, on Monument Valley and the Mexican Hat mill tailings sites. It appeared to the staff, if I have this correct, that the tailings were being taken from Monument Valley to Mexican Hat where they were being treated in accordance with whatever the plan was for remediation, of spreading the tailings out and covering them.

The question, Wasn't Mexican Hat closer to a population center than Monument Valley, and why was it decided that this would be done, the tailings would be taken to Mexican Hat?

Mr. CHARLIE. The amount of groundwater contamination at the Monument Valley site was much greater in detail than the Mexican Hat site.

Mr. MILLER. So, in terms of the aquifers that was a better site?

Mr. CHARLIE. Right.

Mr. MILLER. What about the proximity to the population?

Mr. CHARLIE. That may have had a determination on it, but the project site is down gradient and upwind of the Mexican Hat community, or the Hachita community there.

Mr. MILLER. So the tribe was involved in that and you are comfortable with that decision?

Mr. CHARLIE. As long as it means the final disposal criteria, yes, and it meets the minimum years for stability.

Mr. MILLER. On the question of radon and the homes that were built with the tailings, my understanding is that in a number of these homes readings are above the levels that are considered safe. What, if anything, has been done with regard to those homes? Are people still living in those homes now that we know those levels? Are replacement homes being provided?

Mr. CHARLIE. The homes that were currently identified as having mine wastes used in the construction are still out there. The Navajo Nation has not addressed that yet, simply because of the level of funding needed.

The Navajo Nation in consultation with HUD under the emergency block grant back in the early 1980s had a chance to replace approximately 17 homes within another area; that is, in the Oak Springs-Red Valley area. Those were done through a long process and the homes, I believe, with the exception of one which was renovated, were all completely rebuilt.

Now, again, that was a long, drawn-out process where outside consultants were used, various federal corporations were mandated. Now, we are coming out with some other problems, similar problems in other mine areas, and we have not had the chance to go into these areas. Of course, SMCRA has its limitations, and we cannot do these things.

But as a courtesy to a lot of the impacted areas whenever our projects are in that area, when we suspect that a home is contaminated it's just a matter of running down there and performing some very preliminary radiological scans, and it takes no more than 15 or 20 minutes.

These homes require detailed radiological characterizations for gamma, for alpha, for radon-222 assessments, and all these things are involved. I remember the Oak Springs project entailing at least 1-2 years of study before they were determined to be eligible for replacement.

Mr. MILLER. Thank you. Thank you very much for your testimony and for your help. Do you have any further questions, Karen? Go ahead.

No? Thanks for your testimony this morning, and we will obviously stay in touch with you as we try to work our way through this problem. Thank you.

The next panel that the committee will hear from is made up of W. Hord Tipton, who is the Acting Director of the Office of Surface Mining Reclamation Enforcement, from the U.S. Department of the Interior; and Larry Reed, who is the Director of Hazardous Site Evaluation Division, Office of Emergency and Remedial Response, U.S. Environmental Protection Agency; and Mr. R. Pat Whitfield, who is the Deputy Assistant Secretary for Environmental Restoration, U.S. Department of Energy.

Welcome to the committee, and we will take your testimony in the order in which you were recognized. And, Mr. Tipton, we will start with you.

PANEL CONSISTING OF W. HORD TIPTON, ACTING DIRECTOR, OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT, U.S. DEPARTMENT OF THE INTERIOR, ACCOMPANIED BY BRENT WAHLQUIST, PH.D., ASSISTANT DIRECTOR FOR RECLAMATION AND REGULATORY POLICY; LARRY G. REED, DIRECTOR, HAZARDOUS SITE EVALUATION DIVISION, OFFICE OF EMERGENCY AND REMEDIAL RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY KEITH TAKATA, DEPUTY DIRECTOR, SUPERFUND PROGRAMS, REGION IX; AND R. PAT WHITFIELD, DEPUTY ASSISTANT SECRETARY, ENVIRONMENTAL RESTORATION, OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT, U.S. DEPARTMENT OF ENERGY

STATEMENT OF W. HORD TIPTON

Mr. TIPTON. Thank you very much, Mr. Chairman, and distinguished members of the committee. I am here today to discuss how funds from the Abandoned Mine Land Program can be used to reclaim abandoned uranium mine lands on Navajo lands.

In addition to my brief remarks today, I would like to submit my written testimony for the record. Thank you.

As you know, the primary purpose of the AML Program is to reclaim abandoned coal mines. That is because all proceeds for the fund are paid by coal producers. However, the Surface Mining Act does allow AML funds to be used to address problems caused by other types of mining under certain circumstances.

Funds can be used to reclaim abandoned non-coal problems which would present an extreme danger to health, safety, general welfare or property. Such projects must be approved on a project-by-project basis following a request from a State Governor or tribal governing body.

The Navajo already have been granted \$7.5 million in AML funds for reclamation of extremely dangerous abandoned uranium mines.

This avenue of AML funding to reclaim the remaining uranium mines is still available, provided they meet the extreme danger standard and the proper request and approval occurs.

It should be noted, however, that the dangers that make many such sites eligible for AML funding are generally related to hazardous open shafts, pits and adits, and to steep, unreclaimed high walls rather than dangers from low-grade radiation.

The second circumstance under which AML funds can be used to address non-coal problems is when all of a State's or tribe's known eligible coal-related problems have been completed or funded.

Recently, the Navajo have submitted a grant application for \$460,000 to fund the known remaining abandoned coal sites including about \$56,000 to reclaim sites on our inventory of problem areas.

In addition, the application covers sites now in the process of being added to the inventory. These are generally lower priority, less serious problems. The tribe has adequate funds available to address all of those sites.

This means that the Navajo may be close to obtaining the required certification that all coal-related reclamation has been funded so that they could begin to use AML funds to address a wide variety of non-coal reclamation needs. They are anxious to obtain the required certification and will be soon submitting documentation to the OSM Albuquerque field office. This includes revising the tribe's reclamation plan and requesting the necessary certification that would allow them to begin to address additional non-coal problems.

There is one proviso, however. The Surface Mining Act does not allow the use of AML money for non-coal sites that are designated for remedial action under two other statutes: The Uranium Mine Tailings Radiation Control Act of 1978, and the Comprehensive Environmental Response Compensation and Liability Act of 1980.

However, to our knowledge, there are no uranium sites on the Navajo reservation on the CERCLA list, nor are there any remaining to be funded under the Uranium Mill Tailings Act.

As far as available money is concerned, the Navajo have a sizable amount—\$11 million—already appropriated but not yet requested by the tribe. In addition, there is \$24 million in unappropriated

tribal share funds that could be available to the tribe subject to appropriations.

AML fees collected on coal mined on Navajo lands in 1993 total \$7.7 million. Assuming the same amount is collected through the year 2004, the year the current allocation collection expires, an additional \$39 million would be available to the tribe.

In summary, Mr. Chairman, consistent with our mission we are already eager to see coal-related problems taken care of first, and we have been working closely with the Navajo in preparation of the necessary AML paperwork. However, there is money and there are provisions in the Surface Mining Act that authorize the use of funds for non-coal reclamation under certain circumstances.

I assure you that we are ready to do whatever we can to assist the tribe in their effort to reclaim abandoned mines that meet the eligibility requirements of the Act, both coal and non-coal.

I appreciate the opportunity to appear before you today to discuss this important issue. This concludes my remarks.

Ms. ENGLISH [presiding]. Thank you, Mr. Tipton.

[Prepared statement of Mr. Tipton follows:]

W. Hord Tipton
Acting Director
Office of Surface Mining Reclamation and Enforcement
1951 Constitution Ave., NW
Washington, DC 20240
202-208-2565

Summary of Comments

- I. Describes how Abandoned Mine Land (AML) program funds may be used to reclaim non-coal problems.
 - A. Prior to reclaiming all of its coal problems, the Governor of a State or the governing body of a Tribe responsible for managing its own AML program may request approval to use State/Tribal share AML funds, on a project by project basis, to reclaim extreme danger non-coal mine related problems under section 409 of the Surface Mining Control and Reclamation Act of 1977 (SMCRA).
 - B. After States or Tribes have been certified that all eligible known coal related problems have been completed or funded, they may address a wide range of non-coal related problems under section 411.
 - C. The Navajo Tribe has been granted \$7.5 million to reclaim Priority 1 problems (extreme danger) related to abandoned uranium mines under section 409 of SMCRA.
- II. Certification process of completion of all coal mine related problems described.
 - A. It is noted that section 411(d) of SMCRA states that sites and areas designated for remedial action pursuant to the Uranium Mill Tailings Radiation Control Act of 1978 and the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) are not [emphasis added] eligible for AML funding.
 - B. The cost of reclaiming coal related AML problems on Navajo lands as recorded in OSM's Abandoned Mine Land Inventory System is approximately \$56,000. Some additional coal work is in the process of being identified.
 - C. OSM is assisting the Navajo Tribe carry out the steps as set out in SMCRA to certify that all known eligible coal related problems are reclaimed or funded.

- III. As of September 30, 1993, the Navajo had approximately \$11 million in appropriated AML funds available but not yet requested by the Tribe. In addition, there is \$24 million in unappropriated Tribal share AML funds that will be available to the Tribe subject to appropriations. AML fees collected on coal mined on Navajo lands in Fiscal Year 1993 totaled \$7.7 million. Assuming the same amount of fees are collected annually between Fiscal Year 1994 and 2004, when the current fee collection authorization expires, an additional \$39 million would be available to the Navajo Tribe.

Testimony of
W. Hord Tipton
Acting Director
Office of Surface Mining Reclamation and Enforcement
U.S. Department of the Interior
before the
Subcommittee on Oversight and Investigations
and the Subcommittee on Native American Affairs
Committee on Natural Resources
U.S. House of Representatives
November 4, 1993

Mr. Chairman and Distinguished Members of the Committee:

I am here today to outline how the Office of Surface Mining Reclamation and Enforcement's (OSM) Abandoned Mine Land Program (AML) can be used to reclaim abandoned uranium mines on Navajo lands. The primary purpose of the AML program, which is funded by a fee collected on coal mined in the U.S., is the reclamation and restoration of land and water resources adversely affected by past coal mining. The program can, though, in certain cases also be used to reclaim noncoal mining related problems.

AML program funds may be used to reclaim noncoal problems when:

- o Prior to reclaiming all of its coal problems, the Governor of a State or the governing body of a Tribe responsible for managing its own AML program requests approval to use State/Tribal share AML funds, on a project by project basis, to reclaim extreme danger noncoal mine related problems under section 409 of the Surface Mining Control and Reclamation Act of 1997 (SMCRA)
- o After all eligible known coal related problems have been completed or funded, States or Tribes may address a wide range of noncoal related problems under section 411.

Congress declared in section 409(a) of SMCRA that voids, open and abandoned tunnels, shafts, and entryways resulting from any [emphasis added] previous mining operation constitute a hazard to the public health or safety. Congress therefore provided under section 409 of SMCRA a mechanism that, at the request of the State Governor or the governing body of a Tribe and with the concurrence of OSM, allows AML funds to be spent to fill such voids, seal such abandoned tunnels, shafts, and entryways, and reclaim surface impacts

of underground or surface mines which could present an extreme danger to public health, safety, general welfare, or property. Funds available for use in carrying out such reclamation are those granted to the State or Tribe under the provisions of paragraphs (1) (State/Tribe share) and (5) (historic coal production) of section 402(g) of SMCRA.

While the Navajo Tribe do have some remaining unfunded coal problems, the Tribe has used this provision of SMCRA to address dangerous situations at abandoned uranium mines. To date the Navajo have been granted \$7.5 million under section 409 of SMCRA to reclaim abandoned uranium mines.

When a State or Tribe has addressed all of its known coal problems relating to eligible lands and waters, it may certify to the Secretary of the Department of the Interior that it has done so. After notice in the Federal Register and opportunity for public comment, OSM concurs with such certification if we determine that it is correct. After certification, a State or Tribe may use State/Tribe share funds granted to it to reclaim eligible noncoal AML problems. It is, however, important to note that section 411(d) of SMCRA states that sites and areas designated for remedial action pursuant to the Uranium Mill Tailings Radiation Control Act of 1978 and the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) are not [emphasis added] eligible for AML funding. To the best of our knowledge, there are no uranium sites on the Navajo Reservation on the CERCLA list, nor are there any remaining to be funded under the Uranium Mill Tailings Act.

The Navajo nation began managing its own AML projects in 1988. The cost of reclaiming coal related AML problems on Navajo lands as recorded in our Abandoned Mine Land Inventory System is:

- Completed	\$2,281,373
- Funded	413,692
- Unfunded	<u>56,182</u>
- TOTAL	\$2,751,247

Open portals accounted for slightly over two thirds of the high priority (that is, dangerous and extremely dangerous) coal related AML problems that were on the Navajo lands. Dangerous slides and subsidence problems were the two other major high priority coal related problems. Reclamation of almost all of these high priority coal related problems has either been completed or funded. Only \$51,000 of lower priority problems already on the inventory have yet to be funded. In addition, a few relatively small eligible coal related AML problems not yet on the inventory may warrant reclamation.

The Navajo Tribe is anxious to address all coal problems so that they can use their AML monies to fund reclamation of other problems created by uranium and other noncoal mining and to address the community impacts of coal development. The Tribe is preparing to submit the following documents to OSM's Albuquerque Field Office.

- A reclamation plan amendment allowing the Navajo to reclaim eligible "interim sites."
- A grant application to fund the reclamation of all known remaining coal related problems.
- Certification to the Secretary that all of the coal priorities for eligible lands and waters have been achieved. This would include a statement that a grant application is pending for the known remaining coal related problems.

As of September 30, 1993, the Navajo Tribe had approximately \$11 million in appropriated funds available but not yet requested by the Tribe. In addition, there is \$24 million in unappropriated Tribal share funds that will be available to the Tribe subject to appropriations. Fees collected on coal mined on Navajo lands in Fiscal Year 1993 totaled \$7.7 million. Assuming the same amount of fees are collected annually between Fiscal Year 1994 and 2004, when the current fee collection authorization expires, an additional \$39 million would be available to the Navajo.

Mr. Chairman, I appreciate the opportunity to appear before you today to discuss how the OSM's Abandoned Mine Land Program is used to reclaim abandoned uranium mines on Navajo lands. This concludes my prepared testimony. I would be pleased to answer any questions at this time.

Ms. ENGLISH. Mr. Reed?

STATEMENT OF LARRY G. REED

Mr. REED. Good morning, Chairman Miller, Chairman Richardson, Congresswoman English. I thank you for the opportunity to appear before you today. My name is Larry Reed. I am Director of the Hazardous Site Evaluation Division in the Environmental Protection Agency's Office of Emergency and Remedial Response. It is more commonly known as Superfund.

With me today is Keith Takata, who is the Deputy Director of the Office of Superfund Programs in our San Francisco Region IX office, who will also be addressing site-specific concerns that may be raised today.

As we all are here gathered to discuss the problems of uranium mining waste on Navajo lands, I would like to start with some background on EPA's Superfund program. The Superfund program is intended to address both short- and long-term threats both to the public health and the environment of uncontrolled releases of hazardous substances. Uranium mining sites would be a subset of the overall category that we look at.

When we come to addressing hazardous waste sites, we have to look at a variety of different authorities, statutes, different standards that we address when we are remediating a site that has been raised to our attention. One thing I wanted to discuss briefly with you this morning before turning it over to Mr. Takata is our overall site assessment process, how we go about screening and identifying priority sites for action in the Superfund program.

We basically have three major parts of the program I would like to briefly highlight. Our removal program, which is intended to address immediate, imminent acute threats. Usually it is defined by statute of less than a year in length to clean up, less than \$2 million in total costs. That can be waived under certain circumstances.

Then we have another long-term remedial program, which the Navajo Nation was discussing this morning somewhat, the National Priorities List, which usually are much more complicated sites, much more extensive cleanup being required, on the average of \$25 million per cleanup, looking at all the sites that we have.

The third part of the program is our enforcement program, which, again, was referred to this morning, where we can use our authority to have potential responsible parties step up and address cleanup at sites, or if they don't, go about recovering funds for the cleanup of sites that we have taken action on.

Briefly, the first step in our overall assessment process is the discovery of sites that are brought to our attention by either State, tribal, Federal or the general public that call in, and we receive over 1,000 such notifications per year.

We screen through those first for potential removal actions that would be necessary for acute public health protection. For those that do not fit the removal criteria, we put into an automated inventory tracking system that we have. That system has about 37,000 sites that have been brought to our attention since the program was passed in 1980, and the intent of that inventory is for us to be able to track progress on those sites and to notify the public of the status.

The first stage when those sites have been in the inventory, we do an initial assessment, which is generally using existing information and a visit to the site. That is done within a year. It is a published document that could be done on the site. It is as the 42 sites that were being described earlier, a preliminary assessment.

Sites are screened out all the way through the process as we are trying to identify the worst. The second stage, for example, the site inspection, is actually going to the site, gathering environmental samples and all the various media—soil, groundwater, surface water, air—that might be of concern for us to further evaluate if that is among the worst sites in the country.

We, again, screen out a large number of sites at each stage in this process. To date, we have screened out about two-thirds of the sites on that inventory. Of the 37,000 sites, we have screened out over 22,000 of them.

The final stage in the remedial site assessment process is the preparation of a hazard ranking system package. It is a formal regulatory process, has to go through rulemaking, and has to be able to withstand comment and legal challenge. It is a very intensive effort, perhaps gathering additional sampling. It follows the site inspection. Not all sites that pass the SI stage can meet the threshold, the score that was discussed earlier, and that we can substantiate and put into the public record to withstand legal criticism.

For those sites what we do evaluate is for the various pathways, both health and ecological concerns, surface water, groundwater, air and soil, and we put higher priority on actual exposures as compared to potential exposures. A lot of the sites can be scored on that basis.

We work closely with the Indian nations and States, trying to encourage them to conduct these initial stages of the assessment process. Just from what you heard earlier today, they are closer to the problems and can provide us the information.

I will stop at this point and come back for a conclusion, but turn it over to Mr. Takata.

Mr. TAKATA. Thank you, Larry. Members of the committee, thank you for the opportunity to appear today.

I would like to talk about what we did at the Bluewater uranium sites and the overall strategy that we set up to deal with the mining problems on the Navajo Nation.

But before I do that I would like to briefly touch on how we have tried to support the Navajo Superfund program, since Region IX accepted lead responsibility for Navajo issues.

We have awarded over \$2 million in grants to the Navajo both to help them develop their own Superfund program and to conduct inspections at sites that are potential problems, like the uranium sites. We have used Superfund money to clean up over a half dozen sites, including the \$500,000 that we spent at the Bluewater sites that I will discuss later. In fact, as we speak, we are responding to an emergency right now at the Fleet Maintenance site in Window Rock.

We have also facilitated bringing in other agencies who can help both the Navajo and EPA. For example, we give grant funds to the State of Arizona, who can respond to emergencies on Navajo lands much quicker than we can from San Francisco.

We also work with other Federal agencies on problems that cut across agency lines like we are doing on the uranium mine sites.

Our involvement with the uranium mine problems started soon after we took over as lead for Navajo issues. In November of 1990, as was stated earlier, the Agency for Toxic Substances and Disease Registry issued a public health assessment on the Bluewater sites. We conducted a site assessment. We found that the radiation levels exceeded many times background and we decided that an emergency response should be taken.

Who would do the work and who would pay for that work differed based on the parcel, who owned the parcel and who operated it. Let me spend a little bit of time on that, because I think it illustrates the different ways that Superfund can work.

DOE took the responsibility for one of the parcels. They tried to get their lessee to do the cleanup. The lessee refused, so DOE paid EPA \$275,000 and EPA did the cleanup. That is one way.

Another way was there was a parcel that was owned by several private parties. We issued Superfund orders to those parties, and the companies cleaned up the parcel under our oversight.

On three of the parcels we were unable to find responsible parties, so we cleaned up the parcels using Superfund money. It cost over a half million dollars. We did it with the understanding that the Department of the Interior would seek funds to pay for half of it.

Having taken the actions at Bluewater, we realized that the uranium mine problem was much more widespread than we originally thought and that Superfund alone couldn't take care of all of the problem. So in January of 1992, we tried to pull together all the agencies that are involved with the problem.

We got EPA, the Navajo, Department of the Interior, BLM, BIA, the Office of Surface Mining together in a room and we developed a strategy which is expressed in these two documents—if I can hand these around here to the members. One of them is a letter from EPA to DOI, and the other is an agreement among the Navajo programs. I think some of them were attached to Sadie's testimony.

[The letters follow:]

mou

DATE deliverable



THE NAVAJO NATION

P O BOX 309 • WINDOW ROCK, ARIZONA 86515 • (602) 871-4941

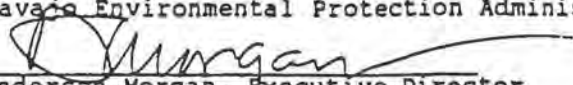
PETERSON ZAH
PRESIDENT

MARSHALL PLUMMER
VICE PRESIDENT

MEMORANDUM

TO : Bernadine Martin, Director
Navajo Abandoned Mine Lands Reclamation Department

: Sadie Hoskie, Director
Navajo Environmental Protection Administration

FROM : 
Anderson Morgan, Executive Director
Division of Natural Resources

RE : COOPERATION BETWEEN THE NAVAJO ENVIRONMENTAL PROTECTION
ADMINISTRATION AND THE NAVAJO ABANDONED MINE LAND
RECLAMATION DEPARTMENT

The Navajo Environmental Protection Administration (Navajo EPA) and the Navajo Abandoned Mine Land Reclamation Department (Navajo AMLRD) have responsibilities to and interests in the protection of the public health and the environment. It is the purpose of this memo to identify areas of mutual concern, and to ensure cooperation and coordination between the two departments.

I. BACKGROUND

There are over 300 in-active leases for coal, copper, and uranium mining activities on the Navajo Nation. Each lease can have up to four mine sites; and each site can include more than one feature¹ that is hazardous to the public health and the environment. In addition to physical hazards, the uranium mine sites have elevated gamma radiation and concentrations of radionuclides that pose a significant long-term threat to adjacent populations, livestock, and wildlife. The goal of this memo is to insure that all the abandoned mine sites are addressed, according to the needs of the Navajo Nation.

II. FINANCIAL RESPONSIBILITIES AND INFORMATION EXCHANGE

The parties agree as follows:

¹A feature is a descriptive component of a site that constitutes a hazard: an open shaft, crumbling trench walls, abandoned explosives, etc.

1) The Navajo AMLRD will refer to Navajo EPA all sites that are ineligible for action under the Surface Mining Control Reclamation Act of 1977 (SMCRA) for assessment. The Navajo EPA will use the U.S. EPA's Preliminary Assessment and Site Investigation Grant to conduct assessments on sites that are ineligible for SMCRA funding. The Navajo EPA will refer additional abandoned mine sites, not recorded on the Mine Site Inventory, to NAMLRD for listing. The Navajo AMLRD will use funds authorized by the Department of the Interior, Office of Surface Mining, to prioritize and reclaim referral sites that are SMCRA-eligible. Pending the establishment of an Emergency Program within Navajo AMLRD, a mine site requiring immediate attention as an imminent threat to the public health and the environment, which Navajo AMLRD can not reclaim expeditiously, will be assessed by the Navajo EPA and referred to the U.S. EPA Emergency Response for removal action.

2) Both departments will provide or exchange information related to specific projects which require coordination. The information will be requested using the following format: 1) stating the name of the requestor, 2) the geographic locations (specific Navajo AMLRD or Navajo EPA sites), 3) the purpose(s) of the request, and 4) the type of site-specific data requested.

III. UNIFORM ASSESSMENT AND RECLAMATION STANDARDS

During mine site assessments and reclamation actions, the following techniques will be employed:

1) Site-specific grids, not to exceed 50 foot intervals, will be utilized to characterize the mine sites. The measurement techniques for each survey point will require the following:

a) True exposure rate assessments will be surveyed at one (1) meter above ground level and recorded in microRoentgen per hour (uR/hr);

b) Equivalent Radium-226 soil concentration assessments will survey the point of interest on contact in counts per minute (cpm) or uR/hr, and converted to picoCuries per gram of soil (pCi/g) using the appropriate conversion equations;

c) In the event that radioactive shine influences the contact reading, delta measurements will be implemented using a lead collimator² to correct and interpret the readings in pCi/g.

2) The assessment of natural and site background levels will be conducted for each site and/or cluster of mine sites

² or lead shield.

3) The Navajo EPA and Navajo AMLRD shall follow their own guidelines and procedures. NAMLRD guidelines and procedures will consider elements such as relative risk or danger to population, the potential for contamination of domestic water supplies, the potential for direct human contact, and any adverse impact(s) to sensitive ecological and environmental settings.

IV. FUTURE AGREEMENTS AND ISSUES

1) On a yearly basis, the Navajo EPA and Navajo AMLRD shall meet to discuss reclamation progress and various issues that relate to this Division of Natural Resources memo, and make such amendments as may be deemed necessary.

It is hereby determined that this Division of Natural Resources memo be adhered to on 4/6/93.

CONCURRENCE:

Bernadine Masi
Director, Navajo Abandoned Mine Land Reclamation Department

Shirley Koshari
Director, Navajo Environmental Protection Administration



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, Ca. 94105-3901

January 30, 1992

Dr. Jonathan P. Deason
Director
Office of Environmental Affairs
U.S. Department of the Interior
1849 C. Street NW PEA (MS2340)
Washington DC 20240

RE: Abandoned Uranium Mine Issues on the Navajo Nation

Dear Dr. Deason:

Thank you for the participation of your staff at the January 22, 1992, meeting in Albuquerque to discuss the Federal Agencies role in the reclamation of abandoned uranium mines on the Navajo Nation. Present at the meeting were representatives of the Department of the Interior's Office of Environmental Affairs (OEA), Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA), Office of Surface Mining (OSM), and Solicitor's Office. EPA was represented by members of my Site Evaluation Section and Emergency Response Section. A representative from Region's 9 ATSDR staff was also present, along with representatives from the Navajo Abandoned Mine Land Program (NAMLP) and Navajo Superfund Program (NSP).

It was concluded that there exist numerous abandoned uranium mine sites on the Navajo Nation that pose significant safety, health and environmental hazards. It was agreed upon in principle, that the OSM, under the authority of the Surface Mine Control Reclamation Act of 1977, will continue to authorize the Navajo Abandoned Mine Land Program to prioritize and reclaim abandoned uranium mine sites on the Navajo Nation. The NSP will assist the NAMLP in developing radiation and reclamation standards.

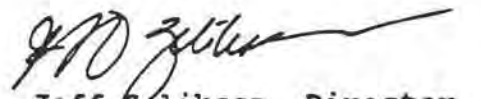
The NSP through the use of EPA's Preliminary Assessment/Site Investigations (PA/SI) grant will conduct preliminary assessments on sites that are ineligible for SMCRA funding. In addition, the NSP may conduct PA's on sites that the NAMLP has not been able to adequately address in a timely fashion and on sites that have additional hazards that NAMLP can not address. These efforts will be coordinated between the two Navajo agencies in consultation with EPA and OSM.

It was also agreed that EPA, OSM, NAMLP and NSP will work together to review the progress of reclamation actions on the Navajo Nation. The NAMLP and the NSP will coordinate activities in

order to avoid duplication of efforts and costs.

The EPA looks forward to working with your staff and the Navajo Nation in developing a Memorandum of Understanding (MOU) formalizing the proposed strategy. Attached is the draft outline of the strategy which describes the procedures and roles of each organizational agency. It was agreed in the meeting by all participants that this draft strategy should be implemented by the appropriate offices pending development of the formalized MOU. Thank you for your consideration on this issue. If you have any questions or concerns, please contact Robert Bornstein of my staff at FTS 484-2298 (415-744-2298).

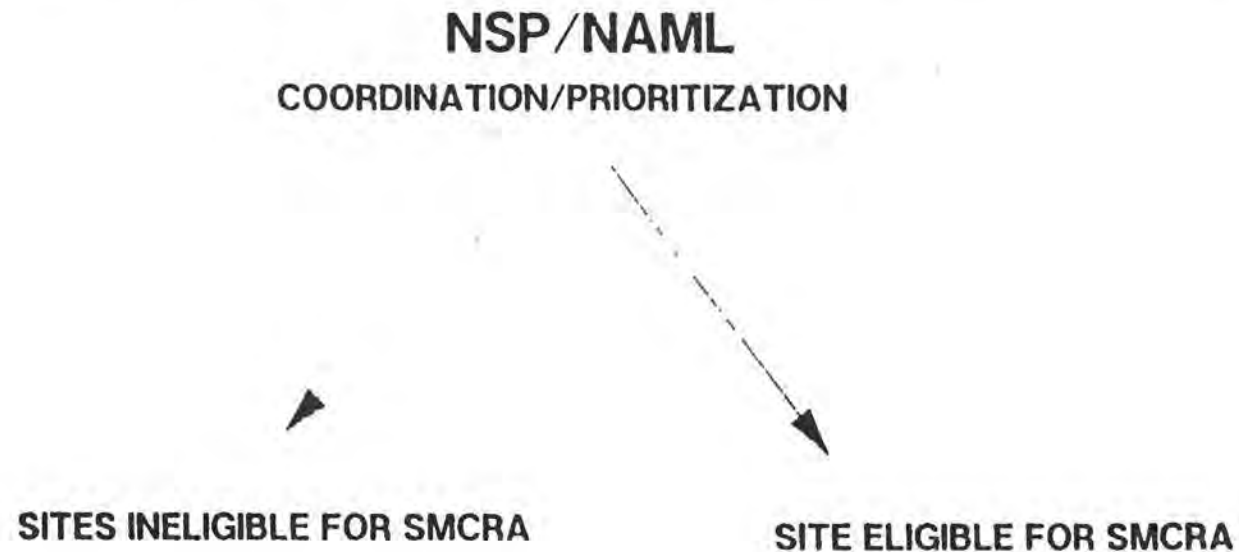
Sincerely,


Jeff Zelikson, Director
Hazardous Waste Division

enclosure:

cc: Raymond Churan, DOI-OEA, Alb.
William Allen, DOI-OEA, SF.
John Craydon, DOI-OEA, HQ
George Farris, DOI-BIA
Philip Thompson, DOI-BIA
Walt Mills, DOI-BIA, Navajo Office
Thomas O'Hare, DOI-Office of Solicitor
Don White, EPA-FOB, Reg. 9
Tom Mix, EPA-SES, Reg. 9
Terry Brubaker, EPA-ERS, Reg. 9
Robert Bornstein, EPA-ERS, Reg. 9
Linda Wandres, EPA-ORC
David Sitzler, DOI-BLM, Alb.
Ron Sassaman, DOI-OSM, Alb.
Joanne Manygoats, NSP
Director, NAML
Peterson Zah, President, Navajo Nation
Bill Nelson, ATSDR

**DRAFT STRATEGY
SCHEME TO ADDRESS URANIUM MINE SITES**



**NSP NAVAJO SUPERFUND PROGRAM
NAML NAVAJO ABANDONED MINE LANDS
SMCRA SURFACE MINE CONTROL AND RECLAMATION ACT OF 1977**

EDITED ON 1/22/92 AT INTERAGENCY MEETING

**DRAFT STRATEGY
SITES ELIGIBLE FOR SMCRA**



**NAML CONDUCTS ACTION
NSP ASSISTS WITH CLEAN-UP STANDARDS**

**NAML REFERS POTENTIAL EMERGENCIES AND INELIGIBLE SMCRA PROBLEMS
TO NSP**

EDITED ON 1/22/92 AT INTERAGENCY MEETING

**DRAFT STRATEGY
SITES INELIGIBLE FOR SMCRA**

NAVAJO SUPERFUND ENFORCEMENT

NAVAJO NATION FUNDED ACTIONS

▶ Navajo Nation Order/PRP Response

▶ Navajo Nation Response Action

EPA REGION IX

HAZARD RANKING EVALUATION

**EMERGENCY CONDITIONS
REMOVAL ASSESSMENT**

NPL LISTING

NOT NPL ELIGIBLE

EPA REMOVAL

NO EPA REMOVAL ACTION

EPA NPL SITE

NAVAJO SUPERFUND REFERRAL

Edited on 1/22/92 At Interagency Meeting

URANIUM MINE STRATEGY PROPOSAL

NSP/NAML PRIORITIZATION

- o The Navajo Superfund and Navajo Abandoned Mine Land Program work together and prioritize sites;

SMCRA ELIGIBLE

- o Sites ELIGIBLE to be addressed by SMCRA will:
 - A) Be Addressed with SMCRA Funds by the NAML, NSP will assist in determining clean-up goals and specifications.

SMCRA INELIGIBLE

- o SITES INELIGIBLE FOR SMCRA WILL BE:
 - A) ADDRESSED BY THE NSP THROUGH THE ENACTMENT OF A NAVAJO NATION ENVIRONMENTAL RESPONSE LAW.
 - NAVAJO NATION FUNDED ACTIONS
 - * NAVAJO NATION ORDER/PRP RESPONSE
 - * NAVAJO NATION FUNDED RESPONSE ACTION

With the use of the EPA CORE Grant, the NSP will draft and develop legislation and regulations to enact a Navajo Nation Environmental Response Law. This legislation will be consistent with CERCLA and act as the Navajo Nation Superfund regulation. A Navajo Nation Superfund will be created to fund Navajo Nation actions. Potential sources of fund: oil, chemical, timber and transportation industries.

- B) NSP Will refer sites that can not be addressed at a local level to EPA for CERCLA evaluation:

SITES REFERRED TO EPA WILL BE ASSESSED FOR:

A) REMOVAL CRITERIA FOR EMERGENCIES

EPA REMOVAL ASSESSMENT

REMOVAL ACTION ----- NO REMOVAL ACTION

B) HAZARD RANKING EVALUATION FOR POTENTIAL NPL SITES:

NPL LISTING ----- NOT ELIGIBLE

**C) SITES INELIGIBLE FOR EPA NPL LIST AND/OR REMOVAL
ACTIONS WILL BE REFERRED BACK TO NSP FOR ENFORCEMENT.**

MEETING JAN 22, 1992 P.A.
ALBUQ N.M.
TRIBE/EPA/DOI NAVAJO URANIUM MINE WASTE NM #X

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Mr. TAKATA. The strategy had a couple components. For sites that were eligible under the Surface Mining Act, the Office of Surface Mines would work with the Navajo Abandoned Mine Land program. They would prioritize those sites and then they would reclaim them as funds were available under the Surface Mining Act, and as you heard earlier, there are still funds available.

The second component was that for sites that were not eligible for the Surface Mining Act or more serious sites whether or not they were eligible EPA would work with the Navajo Superfund program. The Navajo Superfund program would use the grant funds that we gave them to do inspections and then the worse sites would be candidates for either emergency action or listing on the National Priorities List.

We developed a strategy not to avoid our responsibilities under Superfund, but what we were trying to do is maximize everybody's resources to address the problems. DOI had some money. We were short on money. We tried to save Superfund money for what we call the cream of the crop—the worst sites.

Having talked to Sadie last week, and listening to the Navajo panel today, I realize the strategy may not be working as well as it should. First, it appears that the Surface Mining Act may not cover all parts of the problem. The Surface Mining Act focuses more on physical safety and less on the public health aspects of radiation. It appears as though it doesn't cover all the off-site aspects, and I think we are just beginning to realize that now.

I note, based on the agreement that I passed around, that we haven't been operating under this agreement that long. The initial concept was in early 1992 and the agreement between the two Navajo programs was signed in 1993.

Second, it appears that the agencies need to do a better job in coordinating with each other. In particular, there appears to be a very large misunderstanding between the Navajo and EPA in San Francisco about how sites could be eligible for Superfund and what steps need to be taken next on those sites that are a priority to the Navajo.

For example, we have not determined that King Tutt should not be listed on the NPL. That is a very large misunderstanding. We were working on the concept of aggregating sites as was discussed, but they used the term "on hold." We did put the concept on hold because we honestly believed that the Abandoned Mine Land program was addressing most of those sites under the Surface Mining Act.

If the Navajo now feel that that program won't work for the bulk of those sites, we need to take the next step, which is to collect a little bit more data. We may need to expand our site inspection, develop one of these hazard ranking packages that Larry mentioned, and see if it is eligible for listing. That is something that is eligible under the grant that we give to the Navajo, and we are willing to do that.

You can see it in the letter from EPA to DOI, and in the MOA it talks about how sites can drop out and become eligible for Superfund.

Also, we agree in concept with most of the recommendations that were made in Sadie's testimony, especially number three. I think

what it comes down to is what sites we are going to work on and what sites the Office of Surface Mining is going to work on and how do we determine what the lead is her recommendation number three is that we all need to get together and sit down with the list of sites, divide them up and figure out whose got what, I agree with that the most.

As a follow-up to this hearing, I plan to visit the Navajo Nation fairly soon, sit down with Sadie and her staff and try to do that sorting out. But clarifying all of those misunderstandings I don't think will be enough to take care of all the uranium mine problems right away. It's likely that a small number of sites will have high enough radiation levels or populations exposed to be eligible for Superfund cleanup, and even if they all were, Superfund alone couldn't afford to clean up all of the thousand sites. So I think one of the solutions that you might want to look at is whether or not the Surface Mining Act could be broadened to cover some of the public health issues, some of the radiation issues, some of the off-site issues.

That is it. Thank you. And I would be happy to answer questions later.

Mr. REED. I would just like, perhaps, to conclude with overall remarks about the outreach that the Superfund and EPA is having on Indian lands issues. We have about 500 potential sites on Indian lands in our overall inventory, sites that we are screening through. Ten have been proposed or put final on our National Priorities List, and we have completed over 30 removals on Indian lands sites.

Our total commitment of funding, I believe, to the Indian tribes through last year is about \$6 million that we have been able to do either through core grants to build up State programs or to assist in conducting actual preliminary assessments and site inspections at sites.

We also provide technical assistance training nationwide where we invite the Navajo tribe to participate, and this one question came up, there is a possibility of up to \$50,000 in grants available for those sites on the National Priorities List for the public to participate in the decision-making at those sites.

We have invited and the Navajo have participated in, and we have appreciated it, at our last two National Site Assessment Conferences, and we hope they will be participating in our conference this year. We are trying to establish a broader joint National Hazardous Waste Tribal Conference for this upcoming year in the spring, and to be able to refine our policies for working with tribes.

Thank you.

Mr. MILLER. Thank you.

[Prepared statement of Mr. Reed follows:]

STATEMENT OF
LARRY G. REED
DIRECTOR, HAZARDOUS SITE EVALUATION DIVISION
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
AND
KEITH TAKATA
DEPUTY DIRECTOR, SUPERFUND PROGRAMS
REGION 9
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS
—AND THE
SUBCOMMITTEE ON NATIVE AMERICAN AFFAIRS
OF THE
COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

NOVEMBER 4, 1993

Chairman Miller, Chairman Richardson, and Members of the Subcommittees: Thank you for the opportunity to appear before you today. I am Larry G. Reed, Director of the Hazardous Site Evaluation Division within the Environmental Protection Agency's (EPA's) Office of Emergency and Remedial Response. With me today is Keith Takata, Deputy Director of Superfund Programs within EPA's Region 9. We are here today to discuss the problems caused by uranium wastes on the lands of the Navajo Nation. Although EPA oversees the response to short-term and long-term threats to public health and the environment from uncontrolled releases of hazardous substances, a complex set of Federal, State and Tribal regulations governs uranium extraction and beneficiation activities.

The statutes (and associated regulations) include the Clean Water Act, the Clean Air Act, the Safe Drinking Water Act, and the Atomic Energy Act as amended by the Uranium Mill Tailings Radiation Control Act (UMTRCA). The primary Federal agencies

responsible for implementing these statutes are EPA, the Nuclear Regulatory Commission (NRC), and the Department of Energy (DOE).

The Clean Air Act gives EPA the authority to establish National Ambient Air Quality Standards for "conventional" pollutants, like particulates, and to regulate emission of hazardous pollutants, such as radon. Both of these air pollutants are emitted by uranium extraction and beneficiation activities.

The Clean Water Act gives EPA the authority to impose effluent limits, via permits, on point-source discharges of pollutants in process wastewaters or stormwaters to waters of the United States from inactive and active mine sites, including uranium extraction and beneficiation operations.

EPA established an Underground Injection Control (UIC) program under the authority of the Safe Drinking Water Act. Through the program, EPA established a permit system to ensure underground sources of drinking water are protected from the injection of process fluids and liquid wastes, including those produced during uranium extraction and beneficiation, into the subsurface via wells.

Under the Uranium Mill Tailings Radiation Control Act (UMTRCA), EPA has the authority to establish standards of general application that protect the public health, safety and the environment from radiological and non-radiological hazards associated with residual radioactive materials at uranium millings sites, associated vicinity properties, and at disposal

sites. It also authorized EPA to establish standards for managing uranium tailings and wastes at active sites. Also under UMTRCA, DOE's role is to actually clean up and control designated inactive uranium tailings piles to comply with EPA standards.

UMTRCA requires that the Department of Energy (DOE) obtain NRC concurrence for the remedies DOE selects for cleaning up and controlling inactive sites. Under UMTRCA, the NRC is also responsible for licensing active uranium mills and licensing inactive uranium tailings sites that have undergone remediation. Although the NRC has promulgated radiation protection standards that regulate active and inactive uranium milling sites, the NRC has no regulatory authority over uranium mines, except the aboveground activities of solution mines.

The authority of State agencies to regulate uranium extraction and beneficiation activities comes from two sources, federally authorized programs and State statutory authority. The Federal programs applicable to uranium extraction and beneficiation activities that can be transferred to the States include the Underground Injection Control program, the National Pollutant Discharge Elimination System (NPDES) program, and NRC licensing and radiation protection standards. For a State to be able to administer any or all of these Federal programs, the State must have requirements that are at least as stringent as the respective Federal programs.

We will now explain the system EPA uses in the Superfund program to ensure the most hazardous sites are addressed first.

EPA has developed a detailed system to evaluate and prioritize sites. We call this the site assessment process. An understanding of this process will guide the Congress in helping EPA deal appropriately with the issues concerning the Navajo Nation.

To implement the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), Congress mandated the creation of the National Oil and Hazardous Substances Pollution Contingency Plan, or NCP. The NCP addresses three authorities of Superfund: the removal, remedial, and enforcement programs. In general, the removal program is tasked to respond to emergencies, while the remedial program addresses long-term risk and environmental remediation or restoration. The enforcement program oversees the response by potentially responsible parties or seeks to recover expended funds.

When EPA learns of sites, it refers them to either the removal or remedial program for investigation, depending on the immediacy of the reported threat. Sites directed to the remedial program are entered into the Superfund Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). CERCLIS is EPA's tracking database for all Superfund sites. Inclusion on CERCLIS is not an indicator of documented contamination or determination of threat, but is a way to track all EPA response activities. After CERCLIS entry, EPA schedules a preliminary assessment (PA) within 12 months. The Site Assessment Branch of the remedial program characterizes

threats posed by sites and identifies the nation's highest long-term remediation priorities. The primary objective of site assessment is to evaluate sites using the Hazard Ranking System (HRS) and identify which sites should be on the National Priorities List (NPL) for long-term remediation.

The NPL is EPA's list of those sites with the highest priority for long-term remediation. With few exceptions, sites listed on the NPL have had a remedial PA, site inspection, and HRS evaluation. Sites on the NPL include privately and publicly owned lands and facilities. Currently there are 1,266 sites on or proposed for the NPL. Sites are organized by State and Indian Tribe and categorized by HRS score. Score alone may not correlate with threat, although the score can be an indication of relative risk. As we stated before, scoring is done using the Hazard Ranking System: The HRS evaluates threats posed to human and environmental populations via four pathways: ground water, surface water, soil exposure, and air. The HRS considers actual and potential releases and exposures of hazardous substances together with the population that has been or might be affected. Evaluating the four pathways includes considering the likelihood of release or exposure, waste characteristics, and the targets or receptors that might be affected. Likelihood of release considers an observed (actual) release or the potential for release. Observed release may be based on visual evidence (e.g., outfall pipe discharging into surface water) or analytical results (e.g., soil contamination significantly above background

levels). Potential for release considers such factors as depth to aquifer, waste containment, overland flow distance, flood frequency and containment, observed soil contamination, and gas and particulate air migration potential. Evaluating waste characteristics includes human and ecosystem toxicity, ground water and air mobility, sediment persistence, and aqueous food chain bioaccumulation of contaminants, as well as hazardous waste quantity. Targets include the nearby population, populations served by ground water and surface water within designated distance limits, consumer-related industries that might use water (such as agriculture and food preparation), human food chain production (such as fisheries), wellhead protection areas, and sensitive environments (such as wetlands and habitats for endangered and threatened species). The HRS also evaluates actual or potential surface water releases in ground water discharge areas. The HRS weighs heavily the evaluation of hazardous waste quantity and waste containment; the lower the waste quantity and the more reliable the containment, the lower the risk.

Data collection for HRS evaluation begins with the preliminary assessment. The PA is a screening assessment that distinguishes sites posing little or no potential threat to human health and the environment from sites that may pose a significant threat and warrant further investigation. The PA is a compilation of readily available information about the site and its surroundings. It identifies populations and other targets

that might be affected by the site. It includes a reconnaissance of the site and its surrounding environment but does not include sampling. The PA examines key HRS factors such as targets that can indicate a preliminary HRS score greater than the minimum score for NPL eligibility (28.5) and that can be evaluated within the investigation's limited scope. The PA identifies historical waste generation and disposal practices, hazardous substances associated with the site, potential sources of hazardous substances, important migration pathways, and affected targets. The PA sets priorities for conducting site inspections (SIs) and gathers existing data to facilitate later evaluation of the release pursuant to the HRS, if warranted.

Data important to the HRS evaluation—for example, analytical data indicating hazardous substance releases and targets exposed to actual contamination—may not be available during the PA. In these situations, the PA investigator applies his or her professional judgment in a reasonable and consistent manner to form hypotheses regarding the likelihood of release of hazardous substances and their migration to targets.

If the PA indicates that the site poses a significant threat with the need for possible long-term remediation, samples must be collected and a site inspection, (SI) performed. The purpose of the SI is to eliminate from further NPL consideration those releases that pose no significant threat to public health and the environment; to collect or develop additional data to evaluate the release pursuant to the HRS, if appropriate; and to support

remedial investigations or response actions under other authorities. Specifically, the SI investigates the release and migration (or potential release) of a hazardous substance to drinking water wells and intakes; the release and migration of a hazardous substance to surface water sensitive environments or fisheries; the presence of a hazardous substance on residential, school, or day care properties or in terrestrial sensitive environments; and the release of a hazardous substance to the air.

The scope of an SI can often be limited to sampling to confirm whether the site is a potential NPL candidate. A few strategically located samples may indicate that no further action is needed, and collecting all the information required for NPL documentation is unnecessary.

If it appears that the site will qualify for the NPL, an expanded SI will collect all data necessary to prepare an HRS scoring package to propose the site to the NPL. Expanded SI activities include collecting samples to attribute hazardous substances to site operations, establishing representative background levels, and obtaining any missing HRS data to document pathways of concern. The expanded SI may require extensive field activities such as monitoring well installation, air sampling, geophysical studies, and complex background sampling studies. The expanded SI typically requires 25 to 35 samples and 600 to 650 (additional) technical hours. The complexity of the site and

the need for special procedures determine the scope of the investigation.

At the end of the SI, EPA decides whether the site should undergo further investigation (resulting in possible NPL placement and remediation) or be removed from further Superfund consideration. An HRS score of 28.5 or higher qualifies a site for NPL proposal. However, the decision to propose a site to the NPL is based on other factors as well. EPA has developed detailed guidelines for prioritizing sites for NPL proposal. The guidelines identify factors to help EPA regions decide the order in which they should consider sites with completed SIs for proposal to the NPL, including whether a potentially responsible party (PRP) has completed, scheduled, or undertaken a response action.

The site assessment process we have just described comprises the first steps in putting sites on the NPL; however, where we find acute and immediate threats, the Agency will take emergency or short-term removal actions to stabilize the threat. To date, we have done an initial assessment or a PA at 35,568 sites--94.48 percent of the total in our inventory.

NAVAJO NATION LANDS

EPA's Region 9 has been involved in addressing abandoned uranium mine sites located on Navajo Nation lands. Our discussion will focus on the following areas: Region 9's site assessment strategy for addressing other uranium mine sites; an

overview of Region 9's response action at the Bluewater Uranium Mine Sites; and Navajo Superfund Program development.

The Navajo Nation lands are geographically located in the states of Arizona, New Mexico, and Utah. These states fall within three different EPA Regions: Regions 6, 8, and 9. Although each region has worked with the Navajo Nation, beginning in October 1990, Region 9 assumed the lead for environmental issues on the Navajo Nation lands. The Superfund Program in Region 9 has been actively assisting the Navajo Environmental Protection Administration to address potential uncontrolled hazardous waste sites and to develop the capability to address those sites that cannot be remediated through the Superfund process.

SITE ASSESSMENT STRATEGY FOR OTHER URANIUM MINE SITES

Region 9 recognized that the large number of abandoned uranium mine sites located on the Navajo lands was more than the Agency could handle by itself and that other Federal Agencies involved may have an applicable regulatory authority. Therefore, a meeting was convened in New Mexico on January 22, 1992, to discuss the Federal Agencies role in the reclamation of abandoned uranium mines on the Navajo Nation. Present at the meeting were representatives of the Department of Interior's Office of Environmental Affairs (OEA), Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA), Office of Surface Mining (OSM), and Solicitor's Office; EPA Region 9; ATSDR; and representatives

from the Navajo Abandoned Mine Land Program (NAMLP) and Navajo Superfund Program (NSP).

At the January 22 meeting, it was concluded that there exist numerous abandoned uranium mine sites on the Navajo Nation that pose significant safety, health and environmental hazards. It was agreed upon in principle that the OSM, under the authority of the Surface Mine Control Reclamation Act of 1977 (SMCRA), would continue to authorize the NAMLP to prioritize and reclaim abandoned uranium mine sites on the Navajo Nation. The NSP will assist the NAMLP in developing radiation and reclamation standards. It was also concluded that, through the use of EPA's Preliminary Assessment/Site Inspection grant, NSP would conduct preliminary assessments on sites that the NAMLP has not been able to adequately address in a timely fashion and on sites that have additional hazards that NAMLP can not address. Also, all agencies agreed to work together to review the progress of reclamation actions on the Navajo Nation. Therefore, in order to avoid duplication of efforts and costs, NAMLP and the NSP are coordinating their activities in consultation with EPA and OSM. Since the January 22 meeting, the NAMLP (under the Navajo Abandoned Mine Land Reclamation Department, or "NAMLRD") and the NSP (under the Navajo Environmental Protection Administration, or "NEPA") have formalized a memorandum of understanding which identifies areas of cooperation and coordination for the two programs, since both programs have the responsibility for protecting the environment and public health from mining

pollution and other related hazards. The NAMLTP will refer to the NSP all sites that are ineligible for action under the SMCRA for assessment, while the NSP will refer additional abandoned mine sites, not recorded on the Mine Site Inventory, to NAMLTP for listing. The NAMLTP will use funds authorized by OSM to prioritize and reclaim referral sites that are eligible for reclamation under SMCRA. Pending the establishment of an Emergency Program within NAMLTP, mine sites requiring immediate attention as an imminent threat to the public health and the environment that AMLTP cannot reclaim expeditiously will be assessed by the NSP and referred to the EPA for further action if necessary. There are approximately 1104 sites where mining activities took place that generally need to be reclaimed but they are not. The sites of concern involve open pits, portals, waste rock, waste piles, equipment etc. Generally, these sites present physical and safety hazards.

One limitation on the "reclamation" actions at these sites is that SMCRA does not normally allow the NAMLTP to conduct activities off-site, to monitor groundwater, or conduct sampling, among other things. Federal agencies and the Navajo Nation originally believed that SMCRA reclamation was all that would be needed for most of the 1104 sites; however, Region 9 understands the Navajo Nation now believes that some of these sites may have groundwater contamination that need additional study to characterize fully.

These sites may need remediation that SMCRA cannot address. For those sites that need further study, the NSP will conduct further assessments under a PA/SI grant. If a site proves to be a NPL-caliber site, the NPL listing process will be continued. If a site does not score, we will refer the site back to the NSP. If a response action should be taken at sites that are ineligible for listing on the NPL, Region 9 will work with the appropriate Federal and Tribal agencies to look at alternate methods of cleaning up the sites.

STATUS OF ABANDONED URANIUM MINE SITES

To date, 47 abandoned uranium mine sites have been entered into the CERCLIS database by the EPA and the NSP. Forty-three have been evaluated with 17 being screened out as not requiring further action under CERCLA. Twenty-six sites were recommended as low priority for further work because these sites would be the subject of future site reclamation activities. If these sites are successfully reclaimed and required no additional cleanup, they will be screened out as not requiring further action under CERCLA. If, however, there are problems that cannot be addressed under SMCRA, we will continue the site assessment process to determine if the site conditions are serious enough to be cleaned up by EPA.

OVERVIEW OF RESPONSE ACTION AT THE BLUEWATER URANIUM MINE SITES

EPA Region 9 became aware of the Bluewater Uranium Mine Sites (Bluewater) in October 1990 after a notification from the Agency for Toxic Substances and Disease Registry (ATSDR) that

potential health hazards might be associated with the abandoned uranium mines. The Bluewater Uranium Mine Sites are composed of the Brown-Vandever, Brown-Nanabah and Navajo-Desiderio Mines. The sites are located approximately five miles west of Prewitt, New Mexico and lie within the Grants Uranium Mining District. The Brown-Vandever and Brown-Nanabah mines are located on four parcels of land which includes two Native American allotment parcels, one Federal parcel administered by the Department of Energy and one privately owned parcel. At the request of the Agency for Toxic Substances and Disease Registry (ATSDR) and the Navajo Superfund Program, EPA Region 9 conducted a site assessment of the property to determine the radiological conditions at the sites and to evaluate if a removal action was warranted. The radiological assessment was conducted in November 1990. EPA's Office of Air and Radiation in Las Vegas, NV assisted Region 9. Elevated gamma emissions (exceeding fifty times background in certain locations) were detected during the assessment. In addition, elevated concentrations of radionuclides were detected within on-site soil.

After review by Region 9, EPA's Office of Air and Radiation, and ATSDR, it was determined that a response action was warranted at the Sites. After several coordination meetings with the Department of Energy (DOE), Department of Interior's Bureaus of Indian Affairs and Land Management, it was decided that EPA should proceed with a response. DOE, which owns portions of the

Brown-Vandever Site, would conduct its own response on its lands pursuant to Executive Order 12580.

To reduce the immediate potential radiological hazards associated with the mines, the following response would be taken:

- 1) apply an earthen cover to effectively reduce gamma radiation emissions and potential for radionuclide migration;
- 2) fill, seal, and cap mine adits, inclines and ventilation shafts to reduce the migration of radon gas emissions; and
- 3) revegetate reclaimed areas and post warning signs.

The response actions for the Bluewater sites began in August 1991 and were completed in October 1991. Post response gamma surveys revealed that the gamma radiation levels have been actively reduced to natural conditions. EPA and ATSDR concur that the sites have been adequately reclaimed to levels that are protective of human health and the environment. The response actions were done at a cost of \$856,521 to the Federal government. Region 9 and DOI agreed to share the cost (\$581,521) for the two Native American allotted parcels. EPA has requested DOI to pay 1/2 of EPA's expense. DOE's cost was \$275,000.

TRIBAL SUPERFUND PROGRAM DEVELOPMENT

Region 9 has supported the NSP by providing funds to develop capabilities (including writing new laws, developing taxes, and developing revenue to clean up sites) so that the Navajo Nation can address these problems itself and make itself self-sufficient. Since October, 1990, Region 9's Superfund Program has invested approximately \$2,000,000 in financial assistance to the Navajo Superfund Program for site assessments

and for non-site specific (administrative related) activities under a Core Program cooperative agreement. PA/SI funds have been used for site discovery and to conduct preliminary assessments and site inspections at some of the abandoned uranium mine sites. The Core Program cooperative agreement is being used by NSP to develop the capability to take on the responsibility for more sites, to write environmental regulations and procedures, to develop a tax structure and/or a plan to develop revenue to support response activities that currently do not have a funding source.

More specifically, the NSP has completed a study which identifies the present governmental mechanisms available to address environmental hazardous releases on Navajo Nation lands. This study revealed that, although the Federal government has many established programs to address sites containing hazardous substances on the Navajo Nation land, these programs do not address all of the sites which are priorities for the Navajo Nation. The study concluded that since many Federally ineligible sites will continue to be potential environmental hazards on the Navajo Nation, one potential solution is for the Navajo Nation to develop its own response mechanisms to address these sites. The NSP is now looking at options to develop their own hazardous waste program.

CONCLUSION

In conclusion, we would like to tell you briefly about the overall Superfund program's involvement with the Navajo Nation.

Under the authority of CERCLA as amended by SARA, EPA provides financial and technical assistance to Indian tribal governments nationwide in an effort to build Indian tribal capacity to develop environmental regulations and participate in hazardous waste cleanups on Indian lands.

In addition to financial assistance, Superfund provides technical assistance to Indian tribal governments in many areas: conducting removal and remedial actions on tribal lands; implementing SARA Title III Community Right-to-Know Emergency Planning; administering CAs and SACAs; training response and planning personnel for tribal emergencies; conducting preliminary assessments and site investigations; as well as providing outreach to Indian tribal governments on a regular basis.

The Agency's Superfund program is working to realize its long-term strategy of facilitating Indian tribal participation by providing financial and technical assistance and encouraging Indian tribes to identify, assess, and implement remedies at hazardous waste sites.

Again, We thank you for your time and the opportunity to appear before you. We will be happy to answer your questions.

Mr. MILLER. Mr. Whitfield?

STATEMENT OF R. PAT WHITFIELD

Mr. WHITFIELD. Mr. Chairman, I appreciate the opportunity to appear before this joint hearing to discuss the activities of the U.S. Department of Energy in dealing with contamination resulting from uranium mining and processing activities conducted on Navajo Nation lands.

I respectfully request that my written statement be entered into the record, and on that basis I will briefly review the statement.

At issue in today's hearings are abandoned mines on Navajo Nation lands. The Navajo Nation has expressed a grave concern about the potential health and environmental impacts from these abandoned mines. The Department of Energy shares their concerns and is pleased to have the opportunity to discuss our efforts in remediating mining and processing sites.

In this testimony I would like to discuss our substantial progress in remediating those sites and explain the current authority that the Department has to deal with this important issue on Navajo lands.

I will first discuss the two uranium mine reclamation and remediation programs within the purview of the Department. They are the Uranium Mill Tailings Remedial Action Project, and the Uranium Leasing Program. These activities were the direct result of mining and milling operations conducted for the purpose of obtaining uranium for commercial use and for the Department of Energy nuclear weapons program.

Additionally, in response to the expressed interest of this committee, I will provide you with information concerning the activities of the formerly utilized sites remedial action program which does not include any sites on Navajo Nation lands.

Finally, I will discuss the Department's currently limited authority to remediate abandoned mines on the Navajo lands.

In 1978, Congress passed the Uranium Mill Tailings Radiation Control Act, Public Law 95-604, known as UMTRCA. This Act tasked the DOE with remediation of mill tailings at 24 inactive uranium mill processing sites. These sites are located, with the exception of one in Pennsylvania, in the western half of the United States. It is important to note that this Act was established to clean up processing sites, not actual mining sites.

The DOE established the Uranium Mill Tailings Remedial Action Project to execute this program. Four of the 24 inactive mill tailings sites are located on the Navajo Nation lands. The Department has completed remediation on two of these sites and will complete remediation on the other two by 1994. You have already identified those four sites.

Remedial actions at the Shiprock and Tuba City sites were completed in 1986 and 1990, respectively. The Monument Valley and Mexican Hat sites are currently undergoing remediation with Monument Valley tailings being codisposed at Mexican Hat. These sites are scheduled to be completed in March of 1994 and December of 1994, respectively.

A total of 31 vicinity properties were identified for remedial action on the Navajo Nation lands. Remedial action has been com-

pleted at 28 of these properties. Remediation of the remaining properties is under way and should be completed in 1993. These properties are located near the Mexican Hat and Monument Valley sites and consist of a small wetland, a steep canyon, and a private residence.

The Navajo Nation participates in the remedial action through a cooperative agreement which has been executed by the Department, the Navajo Nation and the Nuclear Regulatory Commission.

Under the cooperative agreement the Department provides full funding for the active participation of the Nation in remedial action concurrence and oversight of remedial action execution.

Although the Department has authority to remediate uranium mill processing sites on Navajo lands under UMTRCA, it has limited authority to address uranium mines. Only one mine on Navajo lands has fallen under the responsibility of the Department through the uranium leasing program, and remediation of this site is already completed.

Today's hearing raises a key issue. The Navajo Nation has been left with numerous abandoned uranium mines resulting from mining operations conducted to provide uranium for the Nation's nuclear weapons program. As I have stated, other than the reclamation work conducted at the Haystack Mine under the Uranium Leasing Program, the Department of Energy has not carried out any other reclamation efforts on abandoned uranium mines within the boundaries of the Navajo Nation.

As stewards of similarly contaminated lands, the Department is acutely aware of the profoundly troubled legacy left by these mining activities. However, we must respectfully indicate that the Department has neither the legal authority nor the appropriated funding and associated budget caps to carry out the same kind of reclamation at abandoned mines within the boundaries of the Navajo Nation.

The Department of Energy's cleanup authority is currently limited under UMTRCA and the Uranium Leasing Program to the 24 designated mill processing sites and the 43 uranium lease sites. Although there is a connection between the mining operations and the needs of the nuclear weapons program, Congress has not assigned the Department of Energy with responsibility for executing reclamation or remedial action of abandoned uranium mines.

In conclusion, the environmental and health affects of the materials handled under the programs I have been discussing are of key importance to the U.S. Department of Energy. All three programs—the mill tailings, the Uranium Leasing Program, and the Formerly Utilized Sites Remedial Action Program—are managed under the Environmental Management Program and executed in accordance with a mandate to protect the health and environment of the community.

I would like to acknowledge that, through our efforts in remediating uranium mining and mill sites, our Department has developed significant experience in this area and would be pleased to share any information with other Federal agencies, States, and the Navajo Nation that would be helpful.

Thank you for the opportunity to address this committee regarding the Department's experience in conducting remedial actions on Navajo lands. I will be glad to answer questions as you desire.

Mr. MILLER. Thank you.

[Prepared statement of Mr. Whitfield follows:]

STATEMENT OF

R. PAT WHITFIELD

DEPUTY ASSISTANT SECRETARY

ENVIRONMENTAL RESTORATION

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

U. S. DEPARTMENT OF ENERGY

BEFORE THE

SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

AND

SUBCOMMITTEE ON NATIVE AMERICAN AFFAIRS

OF THE

COMMITTEE ON NATURAL RESOURCES

UNITED STATES HOUSE OF REPRESENTATIVES

November 4, 1993

Mr. Chairmen, I appreciate the opportunity to appear before this Committee to discuss the activities of the U. S. Department of Energy in dealing with contamination resulting from uranium mining and processing activities conducted on Navajo Nation lands.

SUMMARY

At issue in today's hearing are abandoned mines on Navajo Nation lands. The Navajo Nation has expressed a grave concern about the potential health and environmental impacts from these abandoned mines. The Department of Energy shares their concerns and is pleased to have the opportunity to discuss our efforts in remediating uranium mining and processing sites. Only a few uranium mill processing sites and one uranium mining site on Navajo lands currently actually fall under the Department's authority. In this testimony, I would like to discuss our substantial progress in remediating those sites, and explain the current authority that DOE has to deal with this important issue on Navajo lands.

In my testimony today, I will first discuss the two uranium mine reclamation and remediation programs within the purview of the U.S. Department of Energy: the Uranium Mill Tailings Remedial Action (UMTRA) Project and the Uranium Leasing Program. These activities were the direct result of mining and milling operations conducted for the purpose of obtaining uranium for commercial use and for the Department of Energy nuclear weapons program, respectively. Additionally, in response to the expressed interest of this Committee, I will provide you with information concerning the activities of

the Formerly Utilized Sites Remedial Action Program (FUSRAP), which does not include any sites on Navajo Nation lands. Finally, I will discuss the Department's currently limited authority to remediate abandoned mines on the Navajo Nation lands.

I. URANIUM MILL TAILINGS REMEDIAL ACTION PROJECT

In 1978, Congress passed the Uranium Mill Tailings Radiation Control Act (Public Law 95-604), known as UMTRCA. The UMTRCA tasked the DOE with remediation of mill tailings at twenty-four inactive uranium mill processing sites. These sites are located, with the exception of one in Pennsylvania, in the western half of the United States. It is important to note that UMTRCA was established to clean up processing sites, not actual mining sites, and were often centralized facilities located away from the mines. The purpose of UMTRCA as stated in Section 7901(b)(1) of the Act was to provide "a program of assessment and remedial action at such sites...in order to stabilize and control such tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public..."

The DOE established the Uranium Mill Tailings Remedial Action (UMTRA) Project to execute this program. Under the UMTRA, DOE is required to:

- Conduct remedial action at the processing sites; and
- Remediate off-site properties contaminated with uranium mill tailings that originated from the designated processing sites. These "vicinity properties" are a mixture of residences, commercial structures and open lands where tailings have been dispersed from the processing site by

wind or water, or removed by individuals for construction purposes before potentially harmful effects were recognized.

Three of the twenty-four inactive mill tailings sites are located on the Navajo Nation lands. The Department has already completed remediation on two of these sites and will complete remediation on the other two by 1994. These sites are:

- (1) Shiprock, New Mexico;
- (2) Monument Valley, Arizona;
- (3) Mexican Hat, Utah; and
- (4) Tuba City, Arizona. Tuba City is on disputed lands in the Bennett freeze zone, which by latest court decision is within the designated boundaries of the Navajo Nation.

Remedial actions at the Shiprock and Tuba City sites were completed in 1986 and 1990, respectively. The UMTRA Project is currently negotiating a custodial agreement for the long term surveillance and maintenance of the disposal cells.

The Monument Valley and Mexican Hat sites are currently undergoing remediation with Monument Valley tailings being codisposed at Mexican Hat. These sites are scheduled to be completed in March of 1994 and December of 1994 respectively. Surface remedial action includes the demolition of mill equipment and the consolidation and stabilization of mill tailings. The DOE is also conducting a groundwater program to address groundwater contamination issues at these sites.

A total of thirty-one vicinity properties were identified for remedial action on the Navajo Nation lands. Remedial action has been completed at twenty-eight of these properties. Remediation of the remaining properties is underway and should be completed in 1993. These properties are located near the Mexican Hat and Monument Valley sites and consist of a small wetland, a steep canyon, and a private residence.

The Navajo Nation participates in the remedial action through a cooperative agreement which has been executed by the DOE, the Navajo Nation, and the Nuclear Regulatory Commission. A separate cooperative agreement was negotiated for the Tuba City site to include the participation of the Hopi Tribe, which also has an interest in the Bennett freeze land dispute. Under the cooperative agreements, the DOE provides full funding for the active participation of the Nation in remedial action concurrence and oversight of remedial action execution.

II. URANIUM LEASING PROGRAM

Although the Department has authority to remediate uranium mill processing sites on Navajo lands under UMTRCA, it has limited authority to address uranium mines. Only one mine on Navajo lands has fallen under the responsibility of the DOE, through the Uranium Leasing Program, and remediation of this site is already completed.

The Atomic Energy Commission (AEC), predecessor to the U. S. Department of Energy, was charged with the responsibility for developing an adequate supply

of uranium for nuclear weapons production. Part of this responsibility was reflected in the Uranium Leasing Program, which gave the AEC authority for leasing federal lands for exploration and development of a viable domestic uranium source carried forward into the Atomic Energy Act of 1954. The original lease program was terminated in April of 1962. A subsequent leasing program was initiated in 1974 under Circular 8 Revised (1973). This constitutes the present leasing authority of the U. S. Department of Energy.

The U. S. Department of Energy administers forty-three uranium leases nationwide. One such lease is located on allotted Navajo Nation lands and is known as the Haystack mine. This mine is located in McKinley County, New Mexico. Reclamation work was conducted on this lease site in November of 1992 under an agreement between the U. S. Department of Energy and the U. S. Environmental Protection Agency with the involvement of the Agency for Toxic Substances and Disease Registry. The reclamation work on this lease site was performed by the Laguna Construction Company (a Native American owned company) under the direction of the Environmental Protection Agency. The Agency for Toxic Substances and Disease Registry found that the response actions were protective of public health and the environment. By letter dated February 5, 1993, DOE requested that the Public Land Order be withdrawn so the land could revert back to the Navajo Nation. The Haystack mine is the only mine under the Uranium Leasing Program located on Navajo Nation lands.

III. FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

Another program executed by the Department of Energy, under the authority of the Atomic Energy Act of 1954, as amended, is the Formerly Utilized Sites Remedial Action Program, commonly referred to as FUSRAP. The FUSRAP includes forty-four sites located in fourteen states, none of which are on Navajo Nation lands. To date remedial action has been completed at thirteen of these sites.

Under the authority of FUSRAP, sites are usually designated and remediated where radioactive contamination remains from uranium and thorium assaying, processing, and storage operations during the nation's early nuclear development program. Thirty-nine sites were designated under this protocol, while an additional five sites have been assigned through congressional action.

IV. ABANDONED URANIUM MINES

Today's hearing raises a key issue: the Navajo Nation has been left with numerous abandoned uranium mines resulting from mining operations conducted to provide uranium for the nation's nuclear weapons program. As I have stated, other than the reclamation work conducted at the Haystack mine under the Uranium Leasing Program, the Department of Energy has not carried out any other reclamation efforts on abandoned uranium mines within the boundaries of the Navajo Nation. As stewards of similarly contaminated lands, the Department and its individual public servants are acutely aware of the

profoundly troubled legacy left by these mining activities. This is not a theoretical matter for us; we see it in our work and have moved aggressively to reduce the very real risks to people at those sites where the department has responsibility. However, we must respectfully indicate that the Department has neither the legal authority nor the appropriated funding to carry out the same kind of reclamation at abandoned mines within the boundaries of the Navajo Nation.

The Department of Energy's clean-up authority is currently limited under UMTRCA and the Uranium Leasing Program to the twenty-four designated mill processing sites and the forty-three uranium lease sites. Although there is a connection between the mining operations and the needs of the nuclear weapons program, Congress has not assigned the Department of Energy with responsibility for executing reclamation or remedial action of abandoned uranium mines.

V. CONCLUSION

The environmental and health effects of the materials handled under the programs I have been discussing are of key importance to the U. S. Department of Energy. All three programs, UMTRA, Uranium Leasing Program, and FUSRAP, are managed under the Environmental Management Program and executed in accordance with the mandate to protect the health and environment of the community.

The Department recognizes the concerns expressed by members of the Navajo Nation who live adjacent to these abandoned mines as these are similar to concerns expressed by individuals across the nation living near other contaminated sites. However, as I stated above, the Department of Energy has not been directed to conduct remedial actions on abandoned mines located on Navajo Nation lands, except as they fall under our current programs of UMTRCA and the Uranium Leasing Program. Therefore, the Department lacks the statutory authority and funding levels necessary to implement such a program. However, we would like to acknowledge that through our efforts in remediating uranium mining and mill sites, our Department has developed significant experience in this area, and would be pleased to share any information with other federal agencies, states, and the Navajo Nation that would be helpful.

Thank you for the opportunity to address this Committee regarding the DOE's experience in conducting remedial actions on Navajo lands. I look forward to working with both subcommittees in developing an effective approach to the concerns raised by the people of the Navajo Nation.

Mr. MILLER. Thank you all for your testimony.

As we knit this problem together here, what is the problem with the remaining mine sites? Let's move the coal reclamation sites. Let's assume certification and they are off the table here for the moment.

What is the problem with the remaining mine sites that between the three agencies here you cannot address because of legal impediments or, you know, statutory? What is the problem you could not address that exists out there with respect to hazards?

Mr. TAKATA. I can speak to what EPA could address and not address, and maybe the other agencies can do the same.

If a site either qualifies for the National Priorities List or if it qualifies for an emergency response, then EPA could take care of the problem and we could probably take care of the complete scope of the problem. I mean not just the safety hazard aspects, but the radiation off-site problems and groundwater problems.

Mr. MILLER. Right.

Mr. TAKATA. But not all 1,000 are likely to qualify—

Mr. MILLER. Right.

Mr. TAKATA [continuing]. For the NPL. I can't tell you exactly how many would. There ought to be some that qualify. We already know the Bluewater site qualified as an emergency response. So there is going to be a whole other list of sites, several hundred or more, that I hope will—

Mr. MILLER. And at that point, then, your jurisdiction ends.

Mr. TAKATA. Right. And I hope at that point—

Mr. MILLER. Let's move to those sites. Potentially, what are the problems that are raised on those sites that cannot now be dealt with out of the Office of Surface Mining or DOE?

Mr. TIPTON. With respect to use of the Office of Surface Mining Abandoned Mine Land funds, after certification there is considerable flexibility for use of the tribal funds. The essential requirement is that it basically be mine-related, and once that determination and link can be established, then there is lots of flexibility.

Mr. MILLER. So when they get done with certification for those mines that do not end up on the National Priorities List or are emergency treatments, you are telling us what, that Office of Surface Mining funds could be used for both the cleanup and the remediation of the mine, including the tailings?

Mr. TIPTON. I believe that is correct.

Mr. MILLER. And including off-site impacts from the tailings?

Mr. TIPTON. Yes, sir, as long as they can be determined to be mine-related or connected with the operation.

Mr. MILLER. Is that a problem?

Mr. TIPTON. I can't foresee one with that since most of these seem to be fairly clearcut.

Mr. MILLER. We have created so much background radiation, I guess you could argue. But we wouldn't want to argue that, would we?

Now, let's get to DOE. What is it that you bring to the table in terms of dealing with the processing or the mines?

Mr. WHITFIELD. I believe under our current authorizations we would not bring anything to the table toward the remediation of those mines as I now understand the issue.

Mr. MILLER. And including the tailings or any results of processing?

Mr. WHITFIELD. I believe that is correct in that the processing sites have been identified for us and those are within the current program.

Mr. MILLER. All right. What has been done—I believe this is within the jurisdiction of EPA.

Well, let me ask you this. Let me go back to the status of the 42 mines that was outlined by the previous panel and the 28 that they believe meet the threshold for EPA treatment. What is the status of those?

Those are now in Region IX, right? We agreed that that is the line of authority.

Mr. TAKATA. They are in Region IX. Actually, the number we have is 47. But at any rate, there are 40-some-odd sites, and 17 of them fell into our no further action category. In other words, sites that didn't rise to a level high enough for Superfund to work on. Three of them we haven't yet assessed. The ones in the middle—my count is 27, but it is about that number—are in this active status. Those were the ones that we were holding off on believing they were being handled under the Office of Surface Mines program to reclaim abandoned mines.

That is what the agreement was all about that we tried to negotiate amongst the agencies and the agreement that is expressed in the memo between the two Navajo programs.

My understanding is now, listening to the Navajo testimony, that they don't feel that all of those sites are being adequately handled under the Office of Surface Mines programs, and so what we need to do is to move those sites that are a priority to the Navajo through the Superfund process.

We need one more step here. We need to do a little more data collection in order to put together one of these scoring packages that Larry mentioned in order to place it on the NPL.

Before we do that it would be interesting to explore a little bit of what I heard from Mr. Tipton's testimony. He doesn't feel that there are any restrictions on what you can do under their program once they have them. We should probably take a minute to explore that, and then if there are restrictions that are holding up cleanup or reclamation, then we could go forward with NPL listing, if the sites will score.

Mr. MILLER. The current impediment, Mr. Tipton, is certification; is that correct?

Mr. TIPTON. Yes, sir. Certification, and there does need to be an amendment to the tribe's AML Program consistent with the changes made in reauthorization in 1990. We think that can be done concurrently with the certification process.

I guess I should mention that there are certain restrictions with respect to housing and construction work with the Abandoned Mine Land monies, and the only other one would be we aren't allowed to fund those projects that would be designated for funding under either the EPA program or the DOE program.

Mr. MILLER. Do that again for me.

Mr. TIPTON. If they have already been designated and made a listing or met the criteria of EPA or the DOE program, then they

would not be eligible for the funding. But those that fall out from that; then they would be.

Mr. MILLER. If they have already been nominated by the tribe for EPA funding will that later be an impediment if EPA doesn't accept them or believes that they are not eligible?

Mr. TIPTON. If they determined that they are not eligible, I don't believe that presents a problem. But if they determine that they are eligible and they are so designated for that listing, then that does present a problem.

Mr. MILLER. But for the moment, these 28 sites or 42 sites, they are off the table for you until EPA makes a decision about them?

Mr. TIPTON. We would have to determine which of those sites EPA has made their decisions on. Yes.

Mr. MILLER. What if they have been presented?

Mr. TIPTON. We deal with those on a case-by-case as they come to us currently.

Mr. MILLER. What is the status of tailings under SMCRA?

Mr. TIPTON. Again, tailings, as long as they are part of the mine and the project problem, they can be dealt with. To the extent they present an extreme danger or hazard and right now don't meet the Priority I considerations, then they are not eligible under SMCRA.

Mr. MILLER. But after certification, Priority I won't be an impediment; is that right?

Mr. TIPTON. That is correct.

Mr. MILLER. Is there anything that prevents you and EPA getting together between now and the time of certification to divvy up this work, so to speak? Can we properly assume that certification will, in fact, take place, that it is a matter of running the gauntlet here in terms of the Department signing off?

Mr. TIPTON. Yes, sir. We anticipate—

Mr. MILLER. There is nothing that you see out there that is a major in terms of physical work or whatever they have to do?

Mr. TIPTON. Not at this time. It is only necessary that they submit the known remaining coal projects in their grant application. They really don't have to have all the reclamation work completed on those.

Mr. MILLER. But that wouldn't be an impediment to doing as EPA has suggested here, getting together and sorting this out?

Mr. TIPTON. No, not at all.

Mr. MILLER. Recognizing that there is enough jurisdiction and authority here to address these sites. There appears to be enough jurisdiction authority sitting at the table there to address all these sites. I am just trying to determine if in fact that is true.

Mr. TIPTON. I think that would be a good idea. We would need to sit down and work out a strategy.

Mr. MILLER. Mr. Reed, is that correct?

Mr. REED. Certainly.

Mr. MILLER. You know, it is hard for me to understand what has happened here over the last decade or so. But, you know, when was it? In 1983 or so we transmitted a report from EPA outlining some of the hazards on these lands, and I think Dr. Rajen or somebody referred to that before, and yet not a lot has happened here.

I am assuming that we are in a new era here and the goal of this Administration is that Departments work together to solve

problems, and I think that Mr. Takata has suggested that there is a real possibility of doing that. That there is a willingness of EPA to shoulder some of these sites that meet the criteria, and you are saying that those that don't, after certification monies are available to do that, and we all recognize the constraints of resources.

You know on this committee I think I have five members of the Commerce Committee—they have jurisdiction over EPA, is that correct? I mean somehow if there is an impediment here we need to know that. And I think that can be dealt with.

But I don't get a sense that that is the case. It is not the law that is preventing this from happening. I am sure you are trying to husband your resources, and I am sure we haven't been generous enough with the resources to get this done, and there is a lot of criticism of how either we allocate them or you spend them or whatever. I understand all that.

But if we wanted to provide additional resources, either through any one of these agencies in the appropriations process, what we don't have is a comprehensive plan to address these lands on a systematic basis.

I am sure that nobody wants to take on more than they are already taking on in this problem of hazardous wastes, but somehow it seems to me that given the history of this program, the involvement of the Government, that we have some obligation for the combined agencies to say this is the plan worked out with the Navajo Nation that we think will address these lands to the best of our ability. And that goes back to appropriations and the rest of us. But to the best of our ability, this is how we can handle this problem.

I really think that is where we are. If I read through all of the evidence and the past communications, and the acknowledgment as early as in 1983 by Mr.—who was it then? Ruckelshaus—you know, saying that this problem doesn't need congressional response, that they do have the authority. In their study they recognized the authority to regulate these materials.

They also recognized a rather high level of potential cancer deaths for people living in these houses and elsewhere, and the potential problem of people mixing in and around the rather substantial waste product out there in the form of tailings and other material as they have identified, and you have heard enough about the billion tons of material out there. The stage is set to get on with the resolution of this.

And I am fully sympathetic and I think the members of this committee and certainly the people that represent this area, we can appreciate if resources become the problem. That is then our obligation. But we don't have a plan that we could come to and say this is what needs to be funded to get this done in a comprehensive fashion, and that just, obviously, can't continue.

And clearly, the expertise exists within the agencies. Hopefully, there is a new mandate with this Administration to start resolving these problems, and I think it requires—your suggestion, Mr. Takata—that you sit down and do it. I mean I think it is quite correct.

It was said by the previous panel and throughout the literature it says it is very difficult to recognize this hazard on a casual basis.

You know, I think it would be wise for you to go to the reservation. I think it would be wise to see the extent to this, the intermingling of the population and the impacts of this on the lands, and to recognize that in some cases you can't see the danger, but it is still present and it is an obligation of ours.

If I could pursue one more avenue, if you don't mind. I think again this goes to the question of EPA under CERCLA. Has there been any study to determine the ability to reach and the availability of responsible parties with respect to this, or were these mining operations indemnified under the contracting arrangements with DOE and BIA and others? Do we know their status and their presence for the potential candidates of the Superfund sites?

I am sure this was a little bit of an unusual arrangement in terms of how this land was worked at that time.

Mr. TAKATA. Yes. You know, I can only tell you what I know in terms of the sites we have dealt with, at Bluewater and some of the other ones. This isn't like mining in Arizona, where you have huge mines owned by huge companies that still exist. What we have here is thousands of different sites, a lot of them mined by small operators, probably most of them no longer existing.

There are going to be circumstances, and there was in the one parcel that we did in the Bluewater cleanup, where there were successor corporations and in the end we went after, I can't remember, three or four companies. One of them was Santa Fe-Pacific Railroad Company. That was a successor, and they provided for the cleanup funds.

So there are going to be some sites where companies existing today are liable under Superfund, and they will have to do the cleanup. At other sites, we will just have to use Superfund money.

Mr. MILLER. And we can assume that that is in the ordinary course of business.

Mr. TAKATA. Yes.

Mr. MILLER. That you do that legal examination and search to determine whether or not there will be responsible parties available for these sites?

Mr. TAKATA. Right. We always look for responsible parties first to try to get them to clean up. If they can't, then we spend fund money.

Mr. MILLER. Do you know what the status of that search is with respect to these sites?

Mr. TAKATA. No. Most of them probably haven't been started because most of them aren't far enough through the process that we are actually working on responsible party searches.

Mr. MILLER. With respect to that process, what is it again that needs to be done to determine whether or not the 27 sites or the 28 sites or whatever the number is are or are not candidates for the National Priorities List or emergency actions?

Mr. TAKATA. It differs by site, so I can't generalize. You would have to go through each one. But I will try to generalize anyway because I think you are looking for a general answer.

Mr. MILLER. Does the tribe have to develop additional information?

Mr. TAKATA. Right.

Mr. MILLER. Or do you have to verify the information?

Mr. TAKATA. It is probably a little of both. Most of these sites have gone through part of the process, where they have done some of the preliminary work towards listing. As a matter of fact, several of them have these draft scores that the Navajo mentioned, the 28.5.

What we now need to do is verify the data that backs up all those scores. Some of that can be done by the Navajo under the grant, and the rest of that we have to do as we put together these packages. We use these packages to support putting them on the list. So it is a combined effort.

Mr. MILLER. All right. Ms. English?

Ms. ENGLISH. You asked a lot of my questions, but I have a couple that—

Mr. MILLER. I got a couple more, if you want to try for all of them.

Ms. ENGLISH. No. [Laughter.]

Ms. ENGLISH. It might happen.

Mr. Tipton, when you were testifying, in your comments you stated that the certification process was completed after proper requests. How often are the requests improper?

Mr. TIPTON. Well, instead of improper, probably better stated would be incomplete. There is normally some give and take when information is exchanged and requests are presented, but it is normally not a very cumbersome process.

Ms. ENGLISH. So that hasn't been a holdup as far as you are concerned?

Mr. TIPTON. Well, yes.

Ms. ENGLISH. Or a delay?

Mr. TIPTON. It has been a holdup in getting the projects that we know about, first of all, described and entered into the national inventory. Before the projects can be accepted and approved in a grant application, we do have to have accurate information on them to extend the test for eligibility.

Ms. ENGLISH. Does the agency supply appropriate assistance in submitting those requests? And before you answer, what I am getting at here is whether tribes have access to any of the technical assistance that is available to States when they make similar requests.

Mr. TIPTON. The process is essentially the same. We take care not to appear to be trying to force States or tribes to certify when they don't think that they are ready.

But on the other hand, we do have assistance available, and it is my understanding that we are providing as much assistance as the tribe needs or has requested at this point. We have made that a point with our field operations to make sure that the tribes get what they need to complete this.

Ms. ENGLISH. Okay. And one other question. It has to do with one of the paragraphs here in your testimony which states that as of September 30, 1993, the Navajo Nation had approximately \$11 million in appropriated funds available but not yet requested by the tribe, and an additional \$24 million in unappropriated tribal share funds that will be available to the tribe subject to appropriations.

Can you tell me why the money is not being requested?

Mr. TIPTON. I am not sure I have all the reasons for that, but I think part of it is that the remaining coal problems are at this point very small in comparison to the non-coal, to the uranium issues, as pointed out by the tribe's estimate of 1,104 projects.

That is a considerable amount of money and I really don't know why the requests haven't come in quicker. That is something we can work with the tribes on again.

Ms. ENGLISH. I think that would be a question to pursue, because I think it might uncover some of the reasons that the process has slowed down. If the money is there and all the agencies are agreeing to work together, I think it would be important to pursue the answer to that question.

I, as a matter of fact, have to leave for another meeting or I would pursue it further on the record. But I certainly will pursue it after the meeting is closed.

Thank you, Mr. Chairman.

Mr. MILLER. Thank you.

Mr. Tipton, let me ask you, in the case under the current process where you are able to go in under SMCRA for Priority I sites, you have sealed the mine or you have done other things, in some cases the tailings remain; is that correct?

Mr. TIPTON. That would not be unusual. In addressing Priority I projects you are trying to deal with the immediate effects of that.

Mr. MILLER. Right. Are those tailings eligible after certification to be reworked and to be dealt with, because in some cases those tailings themselves are now the hazard? The mine has been sealed. It has been remediated or what have you, but the tailings still exist out there.

Mr. TIPTON. It would depend upon to what extent the tribe determines how important they are or how much of a priority.

But, as far as eligibility, I think yes, they would be eligible.

Mr. MILLER. Okay. So legally they would be eligible if that is a priority that the tribe set.

Mr. TIPTON. I believe that is correct.

Mr. MILLER. Somewhere in the testimony there is reference to one or more of the major problem sites being associated with a company that used to be VCA, which stands for Vanadium Corporation of America, that now is part of some other corporation? Are you familiar with that, Mr. Takata?

Mr. TAKATA. I know that several of our sites have the designation VCA-1, -2, -3, -4, and -5, so they are associated with a whole bunch of them.

Mr. MILLER. So they are on your screen?

Mr. TAKATA. Yes. I am not sure what their successor history is, though. Let me see. I have something here.

[Pause.]

Mr. TAKATA. Okay. The site was operated by VCA, which stands for Vanadium Corporation of America. In 1967, VCA merged with Foote Mineral Company. Foote Mineral Company changed its name to Cyrus Foote Mineral Company in 1989, and that company maintains its headquarters in Exton, Pennsylvania, so I guess there is a successor. But we haven't pursued it any further than that.

Mr. MILLER. Well, I want to thank you for your testimony. What would obviously be helpful to us is that—if you are going to get to

gether, and I assume you are from your testimony, on an inter-agency basis here to sort this out, and to sit down with the Navajos to work out a plan—we would like to be kept informed as to your progress and what the time lines are on that.

We would hope that that could certainly be done prior to certification, so that we don't lose that time, because we are going on the assumption that certification is going to, in fact, take place, and in the meantime that will allow for some apportionment of the burden here in terms of what you think you can do and what the Navajos have to do. Then either that plan is workable or it isn't, and it has a reasonable time line in terms of remediating these sites and/or it has to come back to us because it is far more expensive than people had anticipated or were willing to discuss.

I really don't think that the plan ought to encompass the problem. If the problem is greater than your combined ability and resources, or if you allocated what you anticipate you would allocate over the next number of years and it still doesn't meet that, then that is a problem that this committee, Commerce Committee or the Appropriations Committee or somebody will have to try and address. We either will be able to do that or not do that.

But I think what we need is a defining of the plans and the responsibilities between the agencies, and it would be most helpful to us if we could be kept informed of that process so we can anticipate what problems you may or may not be running into that affect mainly the members of this committee and of the Commerce Committee, and because of the fact that Commerce is going to be dealing with some of these issues. Yes, under Superfund. So we would like to see if we can get some transition going here between the various responsibilities. And I throw ourselves in the pot in terms of being a responsible party here.

So, if you could work out something with the staff of the committee to keep us informed, I would appreciate it. And I appreciate the candor with which you have addressed the need for this to be done, and I hope I properly detect your willingness to do that, and I appreciate that effort to do that.

For those who have sat through the hearing and think maybe that is not a proper assessment, the record of the hearing will be open for two weeks, and people are certainly entitled to submit information, testimony, rebuttals or additions, however they see fit.

Thank you very much for your time and for your help on this problem.

With that the subcommittees stand adjourned.

[Whereupon, at 11:57 a.m., the subcommittees were recessed, to reconvene subject to the call of the Chair.]

